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UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION

HEARINGS

BEFORE THE

COMMITTEE ON COMMERCE
UNITED STATES SENATE

SIXTY-FIFTH CONGRESS

SECOND SESSION

ON

S. RES. 170

DIRECTING THE COMMITTEE ON COMMERCE TO INVESTIGATE ALL MATTERS CONNECTED WITH THE BUILDING OF MERCHANT VESSELS UNDER THE DIRECTION OF THE UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION AND REPORT ITS FINDINGS TO THE SENATE, TOGETHER WITH ITS RECOMMENDATIONS THEREON

Printed for the use of the Committee on Commerce

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UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, DECEMBER 21, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to call, at 2 o'clock p. m. in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Shields, Martin, Bankhead, Nelson, Jones, Sherman, Harding, and Johnson.

The CHAIRMAN. A quorum is present; and as Mr. Edward N. Hurley, chairman of the Shipping Board, is here, we will proceed with his examination. I understand that Mr. John A. Donald, a member of the Shipping Board, is present; but Mr. Stevens, another member of the board, is in Florida; he had just about got there when we passed our resolution; and a telegram was sent to him calling on him to be here at once. He will be back, I think, in time to appear; probably to-day and to-morrow we will have as much as we can do in examining the members of the board who are here.

The authority under which the committee is acting (S. Res. 170) will be inserted in the record of the hearing at this point.

(The resolution referred to is here printed in full, as follows:)

Resolved, That the Committee on Commerce, or any subcommittee thereof, be, and hereby is, authorized and directed to proceed at once with an investigation of the program, progress, and all matters connected with the building of merchant vessels under the direction of the United States Shipping Board Emergency Fleet Corporation, and to report its findings to the Senate at the earliest practical day, together with such recommendations as it may see fit to make as to remedies for existing difficulties, if any; and for this purpose the committee is authorized, during the Sixty-fifth Congress, to send for persons, books, and papers; to administer oaths; to employ a stenographer, at a cost not exceeding $1 per printed page, to report such hearings as may be had in connection with any subject which may be pending before said committee, the expenses thereof to be paid out of the contingent fund of the Senate, and that the committee, or any subcommittee thereof, may sit during the sessions or recess of the Senate.

The CHAIRMAN. Before the committee proceeds any further I will ask that the stenographer insert at this point the resolution adopted by the committee on yesterday.

(The resolution referred to is here printed in full, as follows:)

Resolved, That the Shipping Board furnish us—

1. An itemized statement of all contracts that have been let by and through the board and the subsidiary shipbuilding corporation thereof for the construction of ships, both steel and wood, since the establishment of the Shipping Board. Such statement should give the full name of each person, firm, or corporation with whom each contract has been made, when organized and how

long in operation, the place and locality where the shipbuilding under each contract has been or is being carried on.

2. The number of ships that have been constructed, if any, and the place where and by whom so built.

3. The number of ships now under construction and where and by whom the same are being built, as well as the proportion of work done on each vessel up to the present time.

4. Copies of all shipbuilding contracts entered into, in order that the committee can ascertain the terms of same.

5. Also what ships are being built in private yards for other than Government account, and by whom and where.

The CHAIRMAN. The committee will now hear Mr. Hurley.

STATEMENT OF HON. EDWARD N. HURLEY, CHAIRMAN OF THE UNITED STATES SHIPPING BOARD.

The CHAIRMAN. You are the chairman of the Shipping Board, are you?

Mr. HURLEY. Yes, sir.

The CHAIRMAN. Since when?

Mr. HURLEY. Since July 27.

The CHAIRMAN. July, 1917?

Mr. HURLEY. 1917.

The CHAIRMAN. Mr. Hurley, will you state what your business was before that, and mention any important enterprises with which you have been connected and how, and what official positions you have held?

Mr. HURLEY. Well, I have been in the manufacturing business for about 20 years. I was formerly president of the Standard Pneumatic Tool Co., of Chicago, the company that originated and developed the pneumatic-tool industry in this country and in Europe. We manufactured pneumatic hammers for driving rivets and drilling holes in metal by compressed air. I drove the first rivet in a ship—a large rivet, an inch rivet—that was ever driven by compressed air, on the Clyde. The large steamships that are now being erected, using an inch and an inch and a quarter rivet, could not be built if it were not for the fact that they had these pneumatic riveters. In driving a large rivet by hand it is not possible to fill the hole with hot metal on account of the long time required to drive the rivet with the sledge. So that in order to keep the plates from shearing and have the holes get full of hot metal at once these hammers were absolutely necessary to build the present ships.

That was in 1897, when they were first introduced and placed on the market. You know the history of the industry since that time. The shipbuilding throughout the world has increased and the sizes of the ships have increased materially on account of this particular invention, which I happened to be one of the men identified with, or with its first introduction—the use of pneumatic tools in riveting in this country and in Europe.

After being in that business for a number of years I retired from active work and later organized the Hurley Machine Co., of Chicago, in which I am still a large stockholder; it is engaged in the manufacture of electric appliances for the home, electric washing machines, electric iron machines, electric vacuum cleaners, and other household electrical appliances. That company has been successful.

I resigned from my position as president of that company and three years ago came to Washington as a member of the Federal Trade Commission. I served there two years, as vice chairman for one year and as chairman for another year. I resigned to go back to Chicago, to look after my private affairs, which I had neglected somewhat during my stay with the Federal Trade Commission. I was there for three months, and the President then asked me to go on the Red Cross war council. The war had started, and I came here and served on that council during the $100,000,000 campaign. And from there I went on the War Trade Board, looking into the foreign trade question; that is, from the export-license end of it.

On July 24 I was nominated by the President as a member of the Shipping Board and confirmed on the following day. I have been on the Shipping Board from that time.

The CHAIRMAN. In these matters you have mentioned, you have had the direction and the management and supervision of large numbers of men; you have been dealing with a great many men, have you not?

Mr. HURLEY. Yes, Mr Chairman, as high as 5,000 or 6,000 men; and was always the executive, working the company up from 5 employees to 4,000 employees.

The CHAIRMAN. What was the organization of the Shipping Board when you were elected chairman, and of the Emergency Fleet Corporation?

Mr. HURLEY. Well, they are two distinct organizations. The Emergency Fleet Corporation consisted of a board of trustees, a president, a vice president, and general manager, with the secretary and treasurer, and the other assistants. And that particular plan of organization continued up to November 26, when the by-laws were changed; and instead of electing a general manager by the trustees, after Admiral Capps resigned, we made the general manager an appointive officer, and we changed the by-laws also, taking the general manager's full authority which he had had up to that time, and placing that power in the president.

Senator NELSON. The president of the corporation?

Mr. HURLEY. The president of the Emergency Fleet Corporation.

Senator NELSON. Yes; I understand.

Mr. HURLEY (continuing). Making him solely responsible for the action and the working of the Emergency Fleet Corporation, the same as has been customary in all organizations. When a man is elected president, as a rule, he assumes the entire responsibility. After Admiral Capps became sick I was very anxious to get additional men, business men, around the admiral, so that if he continued to be sick and ailing the way he had been, we would have men about who would take his place.

With that thought in mind—and in addition to that I felt that the president of the corporation, who from a public point of view, and from many other points of view, was really held responsible, in a measure——

Senator NELSON (interposing). Who was the president of the corporation?

Mr. HURLEY. I was the president of the Emergency Fleet Corporation.

Senator NELSON. You were the president of the corporation, and also the president of the board?

Mr. HURLEY. I was chairman of the Shipping Board.

Senator NELSON. I mean you were chairman of the Shipping Board also?

Mr. HURLEY. Yes, sir. I am speaking now, Senator Nelson, more of the Fleet Corporation. Admiral Capps was general manager of that, and I was president.

Senator NELSON. You were president; and under the last amendment adopted to your rules or by-laws, under which the appointment of the general manager was provided for, you had full authority?

Mr. HURLEY. Yes. I had full authority. But I did not have full authority before. Admiral Capps had full authority. When Gen. Goethals was there these by-laws were adopted, giving Gen. Goethals full authority to act.

Senator NELSON. Yes; I understand that.

Mr. HURLEY. And then, when Admiral Capps came in, Admiral Capps had full authority, up to the time that the Admiral was taken sick. And when the new vice president came in——

Senator NELSON (interposing). Well, Admiral Capps was on the Fleet Corporation before you became chairman, was he not?

Mr. HURLEY. No.

Senator NELSON. Did he come in after you did?

Mr. HURLEY. We came together; we went in there the same day.

Senator NELSON. You went in together?

Mr. HURLEY. Yes.

The CHAIRMAN. The committee would probably like at some time to have a copy of the by-laws from the beginning, showing the various changes that have been made from time to time since then.

Senator NELSON. Yes; and I think that should be printed.

(The by-laws referred to are here printed in full, as follows:)

BY-LAWS OF THE UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

ARTICLE I.—STOCKHOLDERS' MEETINGS.

SECTION 1. All meetings of the stockholders of this company shall be held at the principal office or place of business of the company in the District of Columbia.

SEC. 2. The annual meeting of the stockholders of this company shall be held on the 17th day of April of each year. A notice of such meeting, and of the time and place thereof, shall be mailed to each stockholder not less than 10 days previous thereto, in addition to the notice required by law, unless such notice shall be waived in writing by the holders of all the capital stock.

SEC. 3. If for any reason the annual meeting of stockholders shall not be held as hereinbefore provided, such annual meeting shall be called by the president and directors as soon as conveniently may be.

SEC. 4. Special meetings of the stockholders of this company may be called at any time by the president. It shall also be the duty of the president to call a special meeting of the stockholders whenever requested in writing so to do by holders of a majority of the capital stock; and if the president on such request fails to call a special meeting, the stockholders making the request may call such a meeting. Notice of special meetings shall be given by mailing a notice thereof to each stockholder, to his post-office address appearing upon the records of the company, at least 10 days before such meeting, in addition to

the notice required by law. Such notice shall state the time and place at which the meeting shall be held and shall briefly state the object of said meeting, and no business not so stated shall be considered at such meeting except on the unanimous consent of all stockholders present, in person or by proxy, at such meeting.

SEC. 5. At all stockholders' meetings stockholders owning at least a majority of the capital stock of the company, and present in person, by attorney, or by proxy, shall be necessary to constitute a quorum.

SEC. 6. At all annual meetings of stockholders the right of any stockholders to vote shall be governed and determined by the transfer records. Only such persons shall be entitled to vote who appear as stockholders upon the transfer records of the company.

SEC. 7. No share of stock shall be voted upon at any election which has been transferred on the records of the company within 10 days next preceding such election

SEC. 8. Stockholders may give proxies to vote at any election.

SEC. 9. At all meetings of stockholders all questions shall be decided by stock vote. All voting may be viva voce, except that elections of Trustees shall be by ballot: *Provided*, That any member present may demand a vote by ballot.

SEC. 10. All meetings shall be presided over by the president, who may vote on all questions. In the absence of the president, the vice president shall preside, and shall have the powers herein conferred on the president.

SEC. 11. At all meetings for the election of trustees, two inspectors of election shall be first elected by a majority stock vote of all the stockholders present in person or by proxy, but no person who is a candidate for the office of director shall be elected an inspector: *Provided*, That the provisions of this section may be waived by unanimous consent.

SEC. 12. At all meetings of stockholders the following order of business shall be observed, so far as is consistent with the purpose of the meeting:

Reading minutes of preceding meeting and action thereon.
Report of president.
Report of treasurer.
Report of secretary.
Report of committees.
Election of trustees.
Unfinished business.
New business.

ARTICLE II.—THE TRUSTEES.

SECTION 1. The affairs of this corporation shall be managed by seven trustees, to be chosen annually, except that for the first year or until their successors are elected the trustees shall be the persons named for that purpose in the certificate of incorporation. The trustees shall at all times be stockholders of the corporation, and a majority thereof shall be citizens of the District of Columbia.

SEC. 2. Elections shall be at the annual meeting of the stockholders, to be held at the principal offices of the corporation in the District of Columbia, as provided in Article I. Public notice of the time and place of holding such election shall be published not less than 30 days previous thereto in some newspaper printed and published in the District, as provided by law, unless such notice shall be waived in writing by the holders of all the capital stock. All the elections shall be by ballot, and each stockholder shall be entitled to as many votes as he owns shares of stock in the company, and the persons receiving the greatest number of votes shall be trustees.

SEC. 3. In case of any vacancy among the trustees, through death, resignation, disqualification, or otherwise, the remaining trustees, by affirmative vote of a majority thereof, shall elect a successor to hold office until the next annual meeting of the stockholders.

SEC. 4. Any trustee may resign his office at any time, such resignation to be made in writing, and it shall take effect from the time of its delivery to the president.

SEC. 5. Regular meetings of the trustees shall be held the first and third Thursday of each month, immediately following the annual meeting of the stockholders. Special meetings shall be held whenever called by direction of the

president. The secretary shall give notice of each special meeting by personal notification or by mailing the same at least two days before the meeting, or telegraphing the same at least one day before the meeting, to each director, but such notice may be waived by any trustee. Special meetings may be held at such times and places as the trustees may from time to time determine.

OTHER OFFICERS.

SEC. 6. The trustees, immediately after the first, or any annual meeting of the incorporators, shall hold a meeting, at which they shall choose from among their number a president, and one or more vice presidents, and they shall at the same meeting choose a secretary, treasurer, and such other officers as they may deem necessary, who shall hold office until others are chosen and qualified in their stead. The trustees shall have power at any time to fill a vacancy in any office, and all officers shall be at all times subject to removal by the trustees.

ARTICLE III.—POWERS OF OFFICERS.

SECTION 1. The officers of the corporation shall be a president, one or more vice presidents, a treasurer, a secretary, and such other officers as the trustees shall determine. The powers and duties of the secretary and the treasurer may be exercised by the same person.

SEC. 2. The president shall preside at all meetings of the stockholders and of the trustees, and he shall, together with the secretary, sign all contracts and other instruments on behalf of the corporation. He shall have the general oversight and management of the business and affairs of the corporation, and shall have power to employ and discharge all clerks, employees, and agents, determine their salaries, and prescribe and define their duties.

SEC. 3. The vice presidents shall perform such duties as may be assigned or delegated to them by the president, including the power to sign contracts and other instruments.

SEC. 4. The treasurer shall deposit the money and securities belonging to the corporation in such bank, or banks, or other places of deposit as the trustees may designate, and all checks or other orders for the payment of money or the delivery of securities belonging to the company shall be signed by the president and treasurer or by such other person with the treasurer as the trustees may designate. The treasurer shall keep such books of account as the trustees may designate. A report of the financial condition of the company shall be made by the treasurer whenever requested by the president, and such a report shall be submitted by the treasurer at the annual meeting. He shall give such bond as the trustees may determine. The treasurer shall sign all certificates of stock and perform such other duties as the trustees may require.

SEC. 5. The secretary shall keep the minutes of all meetings of the stockholders and of the trustees in books provided for that purpose. He may sign, with the president, in the name of the corporation, all contracts and papers. He shall keep the seal of the company, and affix the same to all certificates of stock and such other instruments requiring the seal as may be directed by the trustees. He shall record all transfers of stock and cancel and preserve all certificates of stock transferred, and he shall also keep a record, alphabetically arranged, in a stock book provided for the purpose, of all those who are or shall have been within six years stockholders of the corporation, showing their place of residence, the number of shares held by them, respectively, the time when they became owners of such shares, and the amount of stock actually paid in.

ARTICLE IV.—STOCK.

SECTION 1. All certificates of stock shall be signed by the president or a vice president, and the treasurer, and be attested by the corporate seal.

SEC. 2. Certificates of stock shall be in the form approved by the stockholders. They shall be transferred only on the books of the company by the holder thereof, in person or by his attorney, upon surrender and cancellation of certificates for a like number of shares; but no shares shall be transferable until all previous calls thereon shall have been fully paid in or the shares have been forfeited for nonpayment.

SEC 3. The trustees may declare dividends from the surplus or net profits of the corporation.

ARTICLE V.—MISCELLANEOUS.

SECTION 1. The seal of the company shall be—

[Seal of Shipping Board, Emergency Fleet Corporation.]

SEC. 2. The fiscal or business year of the company shall begin on the 1st day of July and end on the 30th day of June of each year.

SEC. 3. These by-laws may be amended by the trustees, by a majority vote thereof, at a regular or special meeting.

BY-LAWS OF THE UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

ARTICLE I.—STOCKHOLDERS' MEETINGS.

SECTION 1. All meetings of the stockholders of this company shall be held at the principal office or place of business of the company in the District of Columbia.

SEC. 2. The annual meeting of the stockholders of this company shall be held on the 17th day of April of each year. A notice of such meeting, and of the time and place thereof, shall be mailed to each stockholder not less than 10 days previous thereto, in addition to the notice required by law, unless such notice shall be waived in writing by the holders of all the capital stock.

SEC. 3. If for any reason the annual meeting of stockholders shall not be held as hereinbefore provided, such annual meeting shall be called by the president and directors as soon as conveniently may be.

SEC. 4. Special meetings of the stockholders of this company may be called at any time by the president. It shall also be the duty of the president to call a special meeting of the stockholders whenever requested in writing so to do by holders of a majority of the capital stock; and if the president on such request fails to call a special meeting, the stockholders making the request may call such a meeting. Notice of special meetings shall be given by mailing a notice thereof to each stockholder, to his post-office address appearing upon the records of the company, at least 10 days before such meeting, in addition to the notice required by law. Such notice shall state the time and place at which the meeting shall be held, and shall briefly state the object of said meeting, and no business not so stated shall be considered at such meeting except on the unanimous consent of all stockholders present, in person or by proxy, at such meeting.

SEC. 5. At all stockholders' meetings stockholders owning at least a majority of the capital stock of the company and present in person, by attorney, or by proxy, shall be necessary to constitute a quorum.

SEC. 6. At all annual meetings of stockholders the right of any stockholders to vote shall be governed and determined by the transfer records. Only such persons shall be entitled to vote who appear as stockholders upon the transfer records of the company.

SEC. 7. No share of stock shall be voted upon at any election which has been transferred on the records of the company within 10 days next preceding such election.

SEC. 8. Stockholders may give proxies to vote at any election.

SEC. 9. At all meetings of stockholders all questions shall be decided by stock vote. All voting may be viva voce, except that elections of trustees shall be by ballot: *Provided*, That any member present may demand a vote by ballot.

SEC. 10. All meetings shall be presided over by the president, who may vote on all questions. In the absence of the president the vice president shall preside and shall have the powers herein conferred on the president.

SEC. 11. At all meetings for the election of trustees, two inspectors of election shall be first elected by a majority stock vote of all the stockholders present in person or by proxy, but no person who is a candidate for the office of director shall be elected an inspector; *Provided*, That the provisions of this section may be waived by unanimous consent.

SEC. 12. At all meetings of stockholders the following order of business shall be observed, so far as is consistent with the purpose of the meeting:

Reading minutes of preceding meeting and action thereon.
Report of president.
Report of treasurer.
Report of secretary.
Report of committees.
Election of trustees.
Unfinished business.
New business.

ARTICLE II.

SEC. 1. The affairs of this corporation shall be managed by seven trustees, to be chosen annually, except that for the first year or until their successors are elected the trustees shall be the persons named for that purpose in the certificate of incorporation. The trustees shall at all times be stockholders of the corporation, and a majority thereof shall be citizens of the District of Columbia.

SEC. 2. Elections shall be at the annual meeting of the stockholders, to be held at the principal offices of the corporation in the District of Columbia, as provided in article 1. Public notice of the time and place of holding such election shall be published not less than 30 days previous thereto in some newspaper printed and published in the District, as provided by law, unless such notice shall be waived in writing by the holders of all the capital stock. All the elections shall be by ballot, and each stockholder shall be entitled to as many votes as he owns shares of stock in the company, and the persons receiving the greatest number of votes shall be trustees.

SEC. 3. In case of any vacancy among the trustees, through death, resignation, disqualification, or otherwise, the remaining trustees, by affirmative vote of a majority thereof, shall elect a successor to hold office until the next annual meeting of the stockholders.

SEC. 4. Any trustee may resign his office at any time, such resignation to be made in writing, and it shall take effect from the time of its delivery to the president.

ORIGINAL SECTION.

SEC. 5. Regular meetings of the trustees shall be held annually, immediately following the annual meeting of the stockholders. Special meetings shall be held whenever called by direction of the president. The secretary shall give notice of each meeting by mailing the same at least two days before the meeting, or telegraphing the same at least one day before the meeting to each director; but such notice may be waived by any trustee. Special meetings may be held at such times and places as the trustees may from time to time determine.

AS AMENDED.

(Nov. 15, 1917.)

Regular meetings of the trustees shall be held the first and third Thursday of each month, immediately following the annual meeting of the stockholders. Special meetings shall be held whenever called by direction of the president. The secretary shall give notice of each special meeting by personal notification or by mailing the same at least two days before the meeting, or telegraphing the same at least one day before the meeting to each director, but such notice may be waived by any trustee. Special meetings may be held at such times and places as the trustees may from time to time determine.

Other officers.

ORIGINAL.

SEC. 6. The trustees, immediately after the first meeting of the incorporators, shall hold a meeting at which they shall choose from among their number a president and a vice president, and they shall at the same meeting choose a secretary, treasurer, general manager, and such other officers and agents as they may deem necessary, who shall hold office until others are chosen and qualified in their stead.

AS AMENDED.

(Nov. 24, 1917.)

The trustees, immediately after the first or any annual meeting of the incorporators, shall hold a meeting at which they shall choose from among their number a president and one or more vice presidents, and they shall at the same meeting chose a secretary, treasurer, and such other officers as they may deem necessary, who shall hold office until others are chosen and qualified in their stead. The trustees shall have power at any time to fill a vacancy in any office, and all officers shall be at all times subject to removal by the trustees.

EXECUTIVE COMMITTEE.

SEC. 7. The trustees, by affirmative vote of a majority thereof, may appoint from their number an executive committee of three members, and during the intervals between meetings, it shall have and exercise all of the powers of the board of trustees. Of this committee a majority shall constitute a quorum, but no action taken shall be valid unless the same has the affirmative vote of at least two members. The executive committee may hold its meetings at such times and places, within or without the District of Columbia, as the committee may, from time to time, determine. All vacancies on the committee shall be filled by the trustees at a regular or special meeting thereof. The general manager shall be ex officio chairman of the executive committee.

(Nov. 15, 1917.)

This section eliminated from new by-laws.

Powers of officers.

ARTICLE III.

ORIGINAL.

SEC. 1. The officers of the corporation shall be a president, a vice president, a treasurer, a secretary, a general manager, and such other officers as the trustees shall determine. The powers and duties of the secretary and the treasurer may be exercised by the same person.

All officers shall be appointed by, and subject to removal by, the board of trustees.

AS AMENDED.

(Nov. 24, 1917.)

The officers of the corporation shall be a president, one or more vice presidents, a treasurer, a secretary, and such other officers as the trustees shall determine. The powers and duties of the secretary and treasurer may be exercised by the same person.

SEC. 2. The president shall preside at all meetings of the stockholders and of the trustees, and he shall, together

(Nov. 15, 1917.)

The president shall preside at all meetings of the stockholders and of the trustees, and he shall, together

with the secretary, sign all contracts and papers on behalf of the corporation.

with the secretary, sign all contracts and other instruments on behalf of the corporation. He shall have the general oversight and management of the business and affairs of the corporation, and shall have power to employ and discharge all clerks, employees, and agents, determine their salaries, and prescribe and define their duties.

(Nov. 15, 1917.)

SEC. 3. The vice president shall, in the absence or incapacity of the president, perform the duties of that officer.

The vice president shall perform such duties as may be assigned or delegated to them by the president including the power to sign contracts and other instruments.

(Nov. 15, 1917.)

SEC. 4. The general manager shall be ex officio chairman of the executive committee. He shall have the general oversight and management of the business and affairs of the corporation, and shall have power to employ and discharge all clerks, employees, and agents, determine their salaries, and prescribe and define their duties.

Eliminated from new by-laws.

SEC. 5. The treasurer shall deposit the money and securities belonging to the corporation in such bank or banks or other places of deposit as the trustees may designate, and all checks or other orders for the payment of money or the delivery of securities belonging to the company shall be signed by the president and treasurer or by such other person with the treasurer as the trustees may designate. The treasurer shall keep such books of account as the trustees may designate. A report of the financial condition of the company shall be made by the treasurer whenever requested by the president, and such a report shall be submitted by the treasurer at the annual meeting. He shall give such bond as the trustees may determine. The treasurer shall sign all certificates of stock and perform such other duties as the trustees may require.

(Nov. 15, 1917.)

SECTION 6. The secretary shall keep the minutes of all meetings of the stockholders, of the trustees, and of the executive committee, in books provided for that purpose. He may sign, with the president, in the name of the corporation, all contracts and papers. He shall keep the seal of the company, and affix the same to all certificates of stock and such other instruments requiring the seal as may be directed by the trustees. He shall record all transfers of stock, and cancel and preserve all certificates of stock transferred, and he shall also keep a record, alphabetically arranged in a stock book provided for the purpose, of all those who are or shall have been within six years stockholders of the corporation, showing their place of residence, the number of shares held by them, respectively, the time when they became owners of such shares, and the amount of stock actually paid in.

The secretary shall keep the minutes of all meetings of the stockholders and of the trustees in books provided for that purpose. He may sign, with the president, in the name of the corporation, all contracts and papers. He shall keep the seal of the company, and affix the same to all certificates of stock and such other instruments requiring the seal as may be directed by the trustees. He shall record all transfers of stock, and cancel and preserve all certificates of stock transferred, and he shall also keep a record, alphabetically arranged in a stock book provided for the purpose, of all those who are or shall have been within six years stockholders of the corporation, showing their place of residence, the number of shares held by them, respectively, the time when they became owners of such shares, and the amount of stock actually paid in.

ARTICLE IV.—STOCK.

SECTION 1. All certificates of stock shall be signed by the president or vice president and treasurer, and be attested by the corporate seal.

(Nov. 15, 1917.)

All certificates of stock shall be signed by the president or a vice president, and the treasurer, and be attested by the corporate seal.

SEC. 2. Certificates of stock shall be in the form approved by the stockholders. They shall be transferred only on the books of the company by the holder thereof, in person or by his attorney, upon surrender and cancellation of certificates for a like number of shares; but no shares shall be transferable until all previous calls thereon shall have been fully paid in or the shares have been forfeited for nonpayment.

SEC. 3. The trustees may declare dividends from the surplus or net profits of the corporation.

ARTICLE V.—MISCELLANEOUS.

SECTION 1. The seal of the company shall be—

(SEAL.)

SEC. 2. The fiscal or business year of the company shall begin on the first day of July and end on the thirtieth day of June of each year.

SEC. 3. These by-laws may be amended by the trustees, by a majority vote thereof, at a regular or special meeting.

Senator HARDING. Would it not be helpful at this point, Mr. Chairman, to have Mr. Hurley tell us precisely what the relations are between the Shipping Board and the Emergency Fleet Corporation?

The CHAIRMAN. Well, I take it for granted that he is going to tell us that later. I asked him for the organization of both the Shipping Board and the Fleet Corporation; and he has been telling us about the Emergency Fleet Corporation so far.

It would be well, I think, Mr. Hurley, for you to deal with the personnel of both these bodies.

Mr. HURLEY. The Emergency Fleet Corporation is the manufacturing part of the business. They produce the ships; they manufacture ships, and the Shipping Board operates them. After the ships are completed the Fleet Corporation turns them over to the Shipping Board, and the Shipping Board operates them. We have an operating department and a manufacturing department.

Senator NELSON. Let me ask you a question right in that connection, for my information. You say the shipbuilding corporation—I will call it the "corporation" instead of the board—has charge of the building of ships; but does not the Shipping Board dominate that and actually control the corporation, even in building operations?

Mr. HURLEY. Well, as trustees, yes; but not in active management.

Mr. PAYNE. May I take just a minute, Mr. Chairman, to make a single suggestion?

Senator HARDING. Mr. Chairman, I would like to know the name of this gentleman who is speaking.

The CHAIRMAN. It is Judge Payne, general counsel of the board.

Mr. PAYNE. My name is Payne. I am general counsel. I just want to explain a technical point that has arisen here. The Shipping Board act, under which the Shipping Board is operating, by section 11, provided for the organization of the Emergency Fleet Corporation.

Senator NELSON. Yes; we understand that.

Mr. PAYNE. And that is a corporation with $50,000,000 capital.

Senator MARTIN. Mr. Chairman, I would like to understand this matter before we go further. Is the attorney of the Shipping Board who has just spoken here to represent the board as counsel?

The CHAIRMAN. Judge Payne is the general counsel of the Shipping Board, and he is present. But I do not understand that there is any formal representation of the board before this committee.

Senator SHIELDS. I suggest, Mr. Chairman, that it would be better for us to hear the general counsel of the Shipping Board later. We are hearing the chairman of the board now.

The CHAIRMAN. I understand that; but Judge Payne is simply pointing out the technical distinction between the two organizations.

Senator SHIELDS. Well, that is known to everybody; that is part of the statute.

Senator MARTIN. Well, I did not understand that the Shipping Board was to appear here before this committee by counsel.

The CHAIRMAN. There is no counsel here representing the Shipping Board before this committee.

Senator MARTIN. They need nobody to defend them that I know of.

Senator NELSON. I know the technical distinction between the two organizations that Judge Payne was pointing out. But what I wanted to know, Mr. Hurley, was, did not your board exercise a dominating influence over the Fleet Corporation in reference to its work? Did not your board give the Fleet Corporation orders as to what it was to do or not to do?

Mr. HURLEY. Only through the president.

Senator NELSON. Yes; through the president.

Mr. HURLEY. But the trustees had no voice in the active management of the corporation.

Senator NELSON. No; you were both president of the corporation and chairman of the board?

Mr. HURLEY. Yes.

Senator SHIELDS. The same officers?

Mr. HURLEY. Yes.

Senator NELSON. And the Shipping Board then, through you as chairman, gave directions to you as president of the corporation?

Mr. HURLEY. Not from the manufacturing standpoint; not unless I went to them and asked them.

Senator NELSON. Was the corporation entirely independent of the Shipping Board in the matter of manufacturing?

Mr. HURLEY. Absolutely. The general manager of the Emergency Fleet Corporation, Gen. Goethals, and Admiral Capps—and we are speaking of Admiral Capps's administration now—the trustees never interfered with General Manager Capps. He had full authority to go ahead and do what he liked and to build his ships. And in cooperation with me—we worked very successfully together——

Senator NELSON. Now, who made the contracts?

Mr. HURLEY. Admiral Capps.

Senator NELSON. Were they signed by him?

Mr. HURLEY. They were initialed by him but signed by me.

Senator NELSON. Yes; I understand.

Mr. HURLEY. But the Shipping Board had nothing to do with it. I am speaking now of the period when I went on the board.

Senator NELSON. I understand that, and I am simply asking you that for information.

Mr. HURLEY. Yes.

Senator JONES. You signed the contracts as president of the Shipping Board?

Mr. HURLEY. No; as president of the Emergency Fleet Corporation.

Senator JONES. As president of the Emergency Fleet Corporation. So that Admiral Capps could not make a contract?

Mr. HURLEY. Admiral Capps made all the contracts and initialed them.

Senator JONES. I know, but——

Mr. HURLEY (interposing). And I had nothing to say, but I approved them and signed them as president.

Senator JONES. Yes; but suppose you did not approve them?

Mr. HURLEY. That never occurred; I approved them.

Senator JONES. But it might have occurred, and the contract would not have been made until you approved it?

Mr. HURLEY. When contracts presented to me for signature and initialed by Admiral Capps were properly explained I never questioned him about them. I would not question any manager that I had confidence in, and naturally I approved the contracts which he submitted.

Senator JONES. I understand that. But as a matter of fact, Admiral Capps could not make a contract; it did not become a contract until after you had approved it?

Mr. HURLEY. No, sir.

Senator JONES. And you could approve or not as you saw fit?

Mr. HURLEY. Yes.

Senator HARDING. Was there at any time a disagreement between Admiral Capps and the president of the Shipping Board over a question of policy?

Mr. HURLEY. Not in relation to any contracts; there was no controversy; I never had a cross word with him, because we were cooperating all the time on the development of the work that we had before us. We had some discussions about different subjects, but never a controversy; never a question of any kind in relation to the successful conduct of the business. It has not been retarded in any way by his being general manager and I being president.

The CHAIRMAN. Let us get at the organization now. You were president of the Emergency Fleet Corporation; Admiral Capps was general manager. Who were the trustees?

Mr. HURLEY. The trustees were the members of the Shipping Board and Admiral Capps; he was a member of the trustees. And we had an executive committee, of which Admiral Capps was chairman. I was a member of that executive committee and a member of the board. Mr. Stevens was a member of that executive committee. Admiral Capps——

Senator NELSON (interposing). Then, Mr. Hurley, the trustees of the corporation and the members of the board were identical; the members of your board were trustees of this corporation, were they not?

Mr. HURLEY. They were.

Senator NELSON. So that there was an identity; the same set of officers, the same set of management or control in one case as in the other?

Mr. HURLEY. The five members of the Shipping Board are also trustees of the Emergency Fleet Corporation. In addition, at the time of which you speak Admiral Capps and Mr. Piez were also trustees of the corporation.

The CHAIRMAN. Have there ever been any changes made or contemplated since you went in as president of the Emergency Fleet Corporation, Mr. Hurley?

Mr. HURLEY. Do you mean of the officers, the additional officers?

The CHAIRMAN. Yes.

Mr. HURLEY. Yes; Mr. Chairman. On my recommendation, Admiral Capps appointed a productive committee to investigate the shipyards; business men, of which committee Mr. Piez, president of the Link Belt Co.; Mr. Mason, an engineer; and Mr. Day, of Philadelphia, a production engineer, were members; this committee was appointed to make an investigation as to the conditions in the respective yards throughout the country.

They later made their report, and then I asked that Mr. Piez be elected vice president of the Emergency Fleet Corporation and the trustees elected him. After he was elected vice president we placed him in charge of the organization, the operating part of it. This was at a time when the Admiral was very sick, and we were very anxious to have some one get into harness and be helpful on that account.

Senator NELSON. What business had he been in before he became vice president.

Mr. HURLEY. He had been in the machinery business.

Senator NELSON. What kind of machinery?

Mr. HURLEY. They make conveying machinery.

Senator Nelson. He had not anything to do with shipbuilding?

Mr. HURLEY. Only as an engineering proposition.

The CHAIRMAN. Then there were other changes made subsequently to Admiral Capps's resignation?

Mr. HURLEY. Yes.

The CHAIRMAN. Then what was the organization?

Mr. HURLEY. Then the organization was this: We appointed Admiral Harris general manager in place of Admiral Capps, and Admiral Harris was there a few days, and he resigned.

Senator NELSON. Let me ask you this question about Admiral Harris. Does not he belong to that class of civil engineers in the Navy with the rank of admiral, or is he a full naval officer?

Mr. HURLEY. He had charge of the docks; he is not a shipbuilder.

Senator NELSON. No; but they have a set of civil engineers in the Navy; they give them the rank of captain or admiral, and so on. Was he not of that kind? He was not of the same class of officers as Admiral Capps, was he?

Mr. HURLEY. No.

Senator NELSON. No; that was my understanding.

Mr. HURLEY. That is my understanding; I am not clear on that, however.

Senator NELSON. Well, I think so.

The CHAIRMAN. Then, after Admiral Harris resigned, what was done?

Mr. HURLEY. I appointed Mr. Piez vice president and general manager.

The CHAIRMAN. And the trustees continue you as president of the Emergency Fleet Corporation and Mr. Piez as vice president and general manager; are there any other officers?

Mr. HURLEY. Yes; the chief constructor.

The CHAIRMAN. Who is the chief constructor?

Mr. HURLEY. Admiral Bowles is constructor of steel; Mr. Hayworth is director of operations of the wooden ships. We enlarged the entire organization, and Mr. Day is going to be production manager; and Mr. Mason—or Commander Ackerson is Mr. Piez's assistant; he is in the Navy; he was with Admiral Capps. Admiral Rousseau, of the Navy, is in charge of yards and docks for the Fleet Corporation. Mr. Radford, who was formerly in the Navy, is contract manager; then, there are the secretary and the treasurer and the chief auditor and the accountant, and all the other members of the staff; they have been there since Gen. Goethals was there; they have not been changed.

Senator NELSON. This may seem an unnecessary question, but I want to feel my way in this matter. Have we any Government shipbuilding yards outside of the yards that are building ships for the Navy?

Mr. HURLEY. We have three.

Senator NELSON. Where are they?

Mr. HURLEY. At Hog Island, Bristol, and Newark, N. J.

Senator NELSON. Have you utilized those shipyards?

Mr. HURLEY. They are being erected.

Senator NELSON. Oh, they are being erected now?

Mr. HURLEY. Yes.

Senator NELSON. Are they being erected by the Government?

Mr. HURLEY. Yes.

Senator NELSON. At the expense of the Government?

Mr. HURLEY. Yes.

Senator NELSON. When did you start erecting them?

Mr. HURLEY. Seventy-six days ago we started at Newark. The Submarine Boat Co., at Newark, N. J.; they laid the first keel yesterday of 150 ships.

Senator NELSON. And when did you start the other two yards?

Mr. HURLEY. The other two yards, the American and International, were started in September—the latter part of September.

Senator NELSON. This last September?

Mr. HURLEY. Yes; and the Merchants' Shipbuilding yard, which was the Bristol yard, was started about the same time.

Senator NELSON. Yes. Now, whatever operations you have attempted, then, to carry on in the shipbuilding line have been in private yards, not Government yards?

Mr. HURLEY. We are interested; we help out and make contributions on the contract in many private yards.

Senator NELSON. You advance them money to build their plants with?

Mr. HURLEY. To build their plants.

Senator NELSON. Before they start in?

Mr. HURLEY. No; they have to have some capital.

Senator NELSON. I know; but before they commence to do anything?

Mr. HURLEY. We give them 10 per cent——

Senator NELSON (interposing). You advance the money to create a shipyard?

Mr. HURLEY. No; we do not. An old-established yard that is building ships—in that case we may advance them something to ex-

pand; but in the case of a new shipyard they must have the money to do a certain amount of work, and after they have that money invested and work under way we give them perhaps 10 per cent on their contract.

Senator NELSON. Ten per cent of that money before they have even started building a ship?

Mr. HURLEY. Yes.

The CHAIRMAN. These yards that you have mentioned were not established Government yards, were they? You call them Government yards now because the Shipping Board is furnishing the money to build them?

Mr. HURLEY. Yes.

The CHAIRMAN. They are all new, are they not?

Mr. HURLEY. All new.

Senator JONES. Well, I would like to understand this—that last statement confused me somewhat. I thought these Government yards were ours and that the Government, or the Shipping Board, was putting them up.

Mr. HURLEY. They are.

Senator NELSON. That is the three that he mentioned, I think.

Senator JONES. These three were not private yards that you are taking over?

Mr. HURLEY. No.

Senator JONES. But you are starting them from the ground up?

Mr. HURLEY. Yes, sir; we have spent $9,000,000 so far.

Senator NELSON. Excuse me, but I did not get the locality of those three yards.

Mr. HURLEY. Hog Island is right near Philadelphia, on the Delaware River.

Senator NELSON. Yes; and where are the other two?

Mr. HURLEY. Bristol, Pa., is on the Delaware River, and Newark, N. J., is in the Meadows there.

Senator NELSON. Yes.

Mr. HURLEY. That particular yard is building 28 ways and building 150 boats; that is the Submarine Boat Co. The International Corporation are building 50 ways and 120 boats.

Senator NELSON. Well, is it the plan for you to furnish these yards to these private companies? The Government erects these shipyards, does it?

Mr. HURLEY. Yes.

Senator NELSON. And then you furnish them to these companies that are building ships? The Government is not constructing the ships in its own yard, is it?

Mr. HURLEY. Well, they are our own yards; it is a matter of adjustment afterwards on the contracts that we have; they are working on a percentage basis.

Senator NELSON. I know, but it is the company that is building the ships, and not the Government?

Mr. HURLEY. They are our agents.

Senator NELSON. They are your agents; just as much as any other contractor?

Mr. HURLEY. Yes; only that we built the yards.

Senator NELSON. You build the yards; that is the difference between them and the others?

Mr. HURLEY. Yes.

Senator NELSON. The others furnish their own yards, and in this case you furnish the yards?

Mr. HURLEY. Yes.

Senator JONES. Did these companies have any yards at all?

Mr. HURLEY. What do you mean—at the present time?

Senator JONES. No; did they?

Mr. HURLEY. Oh, yes; the American International Co. owned the New York Shipbuilding Co., and they are drawing from the staff of the New York Shipbuilding Co., so that they are experienced men. And the Submarine Boat Co. also ran a shipbuilding business.

Senator JONES. What kind of shipbuilding business were they in; were they building merchant ships or submarines?

Mr. HURLEY. Submarines, submarine chasers, and so forth.

Senator JONES. They had built merchant ships, too?

Mr. HURLEY. Yes; the New York Shipbuilding Co. had. The Bristol yard is owned by the Merchants' Shipbuilding Co., and they have an experienced set of men. So that these are not new people in the work.

The CHAIRMAN. Where are the yards of the Merchants' Shipbuilding Co.?

Mr. HURLEY. It is at Chester, Pa.

The CHAIRMAN. Now they are operating your yard near Bristol, Pa.?

Mr. HURLEY. We are building a Government yard at Bristol.

The CHAIRMAN. And the Merchants' Shipbuilding Co. are the people who are actually building the ships there?

Mr. HURLEY. Yes.

Senator NELSON. Is that the company that Mr. Hannevig is connected with?

Mr. HURLEY. No; it is the Harriman people who are interested in it.

Senator NELSON. He has got a yard in Wilmington and one up the Delaware River?

Mr. HURLEY. That is the Pennsylvania Shipbuilding Co.

Senator NELSON. Yes; you know who Mr. Hennevig is?

Mr. HURLEY. Yes.

The CHAIRMAN. How many ships are the Merchants' Shipbuilding Co. building?

Mr. HURLEY. They are building 40 ships.

The CHAIRMAN. Of what size are the ships?

Mr. HURLEY. Nine thousand tons.

Senator NELSON. Are they steel ships?

The CHAIRMAN. Are they fabricated steel ships?

Mr. HURLEY. Yes.

The CHAIRMAN. They are fabricated steel; and the contract with them was on what kind of basis?

Mr. HURLEY. On a percentage basis.

The CHAIRMAN. Cost plus percentage?

Mr. HURLEY. No; not cost plus percentage; we have not any cost plus. That is a detail that Admiral Capps undertook himself, and we have not made any cost plus contracts.

Senator NELSON. For my information I will ask—it may seem a somewhat foolish question—but what is fabricated steel? What is the difference between that and other steel construction?

Mr. HURLEY. In the case of a fabricated ship, they lay the keel in a shipyard, and the old way was to bring all the plates there and drive the rivets on the framework. This plan is to have 40 or 50 outside shops put two plates together and drive the rivets and bring the plates to the shipyard and put the plates on; and 50 per cent of the riveting is done outside.

Senator NELSON. I see.

Mr. HURLEY. And the holes are reamed, and the plates are bent, and everything is put in shape so that the American International Co., for instance, have outside of the shipyards about 50 plants working on these plates.

Senator NELSON. The effect of that is to expedite greatly the building of such ships?

Mr. HURLEY. Oh, yes.

The CHAIRMAN. You mentioned awhile ago the Submarine Boat Co., of Newark, N. J. Do you remember the type of ships that they are building, and the number?

Mr. HURLEY. They are building 150 5,000-ton ships.

Senator NELSON. Are those merchant ships?

Mr. HURLEY. Oh, yes; they are cargo carriers; nothing but cargo carriers.

Senator HARDING. Had a fabricated ship ever been built successfully before?

Mr. HURLEY. In England it has; they built two over there; one was here about a month ago.

Senator HARDING. They have built two of those ships?

Mr. HURLEY. Yes; there is not any great difference about the fabricated ship.

Senator HARDING. What is the difference between a so-called fabricated ship and the standard steel ship?

Mr. HURLEY. None; except that the shipbuilders drive the rivets. They are all countersunk rivets in the shipyards, and, as I said, it is a question of saving this labor in the yards; instead of crowding it all on to the ways, or on to a ship, they facilitate matters by bringing the work in half finished.

Senator HARDING. Before we get away from the subject of these yards, what sort of a shipbuilding enterprise has been inaugurated at Alexandria, Va.; is that a private enterprise?

Mr. HURLEY. Yes.

Senator HARDING. But it is under contract with the Emergency Fleet Corporation to produce ships, is it not?

Mr. HURLEY. At a flat price.

Senator HARDING. When was that enterprise started?

Mr. HURLEY. The contract was let just before Admiral Capps left. The admiral let the contract and I approved it. Mr. Morse, who has the contract for construction at Alexandria, is building ships up in Connecticut now and has made very rapid progress on the program he has had. And where we have a man that is a shipbuilder and is building ships successfully and he desires to expand or start a new yard, we are inclined to encourage him; but we are reluctant about starting new yards with inexperienced men.

Senator HARDING. Well, were the Morse yards started essentially with Government capital?

Mr. HURLEY. Oh, no; they invested their own money. We have not put a cent in the Alexandria yard.

Senator HARDING. Now, so many things have come up here that I want to be pertinent. Has the Emergency Fleet Corporation driven shipbuilding in private yards to full capacity while constructing these Government yards?

Mr. HURLEY. Yes.

Senator HARDING. Well, they have had a minimized capacity, somewhat of a reduced capacity of production, have they not, in the private yards?

Mr. HURLEY. Oh, yes; they have not come up to our expectations, on account of the fact that they have started new yards and the labor question was so serious.

Senator HARDING. I was going to ask you, did the labor taken by the Government construction impair the efficiency of the private yards somewhat?

Mr. HURLEY. Very much. The new shipyards starting in different localities impaired the efficiency of the old established yards, because they went out and hired men away from each other. The new yards would give a bonus to a man to get him to work for them and take him away from the other yard. There was a good deal of that for three or four months; it has improved somewhat now.

Senator HARDING. The point I am trying to get at is this: Would you not have had earlier deliveries of ships if there had been some education of private yards under contract with the Emergency Fleet Corporation along that line?

Mr. HURLEY. It is hard to answer that question, Senator Harding. We talked to the shipyard owners and did everything we possibly could along that line. And they would agree to it, and then their foremen would go out and have a man at the gate of another yard and employ all the riveters and other workers that they could get from the other yards. We sent two tourists' sleeping cars loaded with men for western shipyards a short while ago, and we were asked to give them priority to get them out there. And then the eastern shipyards went out there and employed riveters away from those very successful yards on the Pacific coast.

Senator HARDING. How soon will you have completed the new Government yards?

Mr. HURLEY. Well, the Submarine Boat Co. yard is 90 per cent completed now; and, as I say, they have laid three keels.

Senator HARDING. What is the situation as to Bristol?

Mr. HURLEY. Bristol is not as far advanced. Neither is the American International.

Senator HARDING. The question I am trying to lead to, in order to obtain some assurance, is, Will the forces engaged in fitting these yards be available for the building of ships?

Mr. HURLEY. Do you mean the erecting crews?

Senator HARDING. The working forces.

Mr. HURLEY. Yes; that has affected some of the yards; the building program was so large. Of course, those men are a somewhat different class of men. The men that drive rivets on structural steel buildings are not considered first-class ship riveters.

Senator HARDING. Can they not be made such?

Mr. HURLEY. Oh, yes.

Senator HARDING. How many thousands of those men will the release of the construction forces bring to the shipbuilding forces?

Mr. HURLEY. I will say 15,000. I am guessing on that; there are a large number of men on that. I have the figures on that already made out at the office.

Senator JONES. Who are the people connected with the Submarine Boat Co.?

Mr. HURLEY. Mr. Carse is the president of it.

Senator JONES. Do you know the other officers?

Mr. HURLEY. No; I do not.

Senator JONES. Have they a contract similar to that of the Merchants' Shipbuilding Co.?

Mr. HURLEY. Yes; on the same basis.

Senator JONES. Who are the people connected with the American International Co.?

Mr. HURLEY. They are the New York shipbuilding group of men. Mr. Robinson is the president of it.

Senator JONES. And how many ships have they contracted to build?

Mr. HURLEY. They have 120.

Senator JONES. Steel or fabricated.

Mr. HURLEY. Fabricated steel.

Senator JONES. Fabricated steel? They are on the same kind of basis as the Submarine Boat Co.?

Mr. HURLEY. Yes.

Senator JONES. Where are they located?

Mr. HURLEY. Hog Island, on the Delaware River, across the way from Philadelphia.

The CHAIRMAN. Mr. Hurley, why is it that in this organization you have taken in officers of the Navy and people who have been connected with the Navy? What is the necessity for taking them in?

Mr. HURLEY. Well, Gen. Goethals had the Navy men in there, and Admiral Capps was appointed by the President, or assigned by the President, to the position, and Admiral Capps selected Admiral Bowles and Commander Ackerson and Mr. Radford.

The CHAIRMAN. Are they paid by the Shipping Board?

Mr. HURLEY. The naval officers that are on the staff are not paid by the Shipping Board; they are assigned from the Navy.

The CHAIRMAN. They are simply assigned; was that on the request of your board?

Mr. HURLEY. No; they were there. Admiral Harris was the only one that I ever suggested be assigned to it.

The CHAIRMAN. Of course, Mr. Hurley, our chief concern has been to get the ships built and to put them into the service. Now, will you tell the committee what that involves? What are the steps necessary for doing that, and what does it involve?

Mr. HURLEY. Would you permit me to read a short statement that I have prepared here?

The CHAIRMAN. Yes; certainly.

Senator NELSON. May I ask, Mr. Chairman, a preliminary question? We requested you, Mr. Hurley, to furnish us a statement. You know what that is?

Mr. HURLEY. Yes.

Senator NELSON. Is there any part of that statement that we requested you to furnish us that ought to be treated as confidential and not made public?

Mr. HURLEY. I would like to have at some time a private session with the members of this committee. There is nothing in this statement that I have that is confidential.

Senator NELSON. No; I mean the information contained in the answer to our request. If there is any part of that that you think should be regarded as confidential and not made public, I wish you would let us know now. The reason I ask is that I did not want to ask any questions that would be improper.

The CHAIRMAN. I understand that the situation with reference to that is that the material in answer to the resolution of this committee is all here. It is quite a voluminous mass of material. The question arises whether the committee would rather have that material presented when Admiral Bowles comes on, or somebody else who has had actual connection with the construction problem, and who can deal with the statements that have been furnished in regular order, and explain some of the figures, etc., or whether the committee would prefer to have this mass of material printed just as it is. It can be presented either by a witness in connection with his statement, or in documentary form.

Senator NELSON. I would suggest, Mr. Chairman, that if there is a lot of that material, an index or brief of it should be prepared, so that we would not have to wade through every document that they have furnished.

The CHAIRMAN. Yes. For instance, we have called upon them for contracts. Now, if we decided to have all of those contracts printed, we would have an enormous mass of undigested material.

Senator NELSON. Yes; we do not want that.

Senator HARDING. I think if we have those documents where they can be referred to, that is all that we will require. The particular information that we wish can be drawn from the witnesses who appear before the committee, much better than it could be obtained by wading through a great mass of documentary evidence.

The CHAIRMAN. Then we can get that data later.

(The data referred to will be found printed in full on page — of this volume.)

Mr. HURLEY. At the outset of this inquiry I would like to say that the Shipping Board, appreciating the fact that the Senate's desire is to be of national service, welcomes a thorough investigation of its activities and accomplishments. I am especially glad of the opportunity which this investigation affords to disclose the actual facts in the situation. When Admiral Capps and I joined the Emergency Fleet Corporation on July 27, 1917, there were under contract 840,900 tons of wooden ships, 207,000 tons of composite ships, and 587,000 tons of steel ships. Since then additional contracts amounting to 3,378,200 tons of steel ships and 504,000 tons of wooden ships have been placed. In addition the Fleet Corporation has rendered financial aid to and is directing the work of extension and development in 42 yards. The remaining new yards are being constructed by private capital. A portion of the contracts placed since July 27 were prepared and practically closed by our predecessors. It must be borne

in mind that this vast program of construction undertaken in the past nine months was superimposed on a navy program which was the equivalent in dollars and, therefore, in shipbuilding effort, of the construction of 2,500,000 tons of merchant shipping. The Navy program and private contract absorbed practically 70 per cent of the 18 prominent yards in existence at the beginning of the war with Germany, the remaining 30 per cent of these yards being taken up with the construction of merchant shipping for both foreign and American account, which was requisitioned under the order of August 3. This tonnage is now being completed under the supervision and control of the Emergency Fleet Corporation. When we compare the total tonnage under construction for both the Navy and the Shipping Board with the greatest annual output of American yards prior to the war, which Mr. Homer Ferguson in a recent article puts at 615,000 tons, some conception of the magnitude of our undertaking will be had.

The contracts of the Emergency Fleet Corporation have been let to 110 shipyards, of which 36 existed on January 1, 1917, and 74 have been created since. In addition the Emergency Fleet Corporation has requisitioned vessels which are building in 22 shipyards in addition to the above, so that the Fleet Corporation is at present controlling work in 132 yards, of which 58 are old and 74 are new.

The great and constant increase in new yards to be constructed and tonnage awarded has required a constant expansion of our organization, and has compelled us to make changes which the proper carrying out of this vastly expanded program made imperative.

The organization has been expanded not only with the idea of checking up and safeguarding the expenditure of the vast sum intrusted to our care, but with the idea of infusing both into the shipbuilders and the workmen engaged in the art that degree of enthusiasm for the work and interest in it that is absolutely essential to the carrying out of our purpose. We have recognized that it was necessary not only to vastly expand the number of men, and therefore to evolve a method of getting an adequate supply of labor and training it if necessary, but we have also been convinced of the necessity that we must spend more time in training up the executive and technical organization in those plants which have undertaken contracts for which their experience did not particularly fit them. The big problem we have before us is to secure an adequate supply of experienced labor and competent shipyard organizations to direct it. The first contract was let on April 27, 1917. During that and successive months contracts were let as follows [reading]:

Month.	Number o contracts.	Number o vessels.	Tonnage.
April	1	12	42,000
May	9	78	854,200
June	20	137	646,900
July	24	138	591,800
August	25	110	424,300
September	12	185	1,142,500
October	6	114	934,200
November	46	192	1,054,400
December	4	35	326,800
Total	146	996	5,517,100

Senator NELSON. What proportion of those are wooden vessels, and what proportion are steel?

Mr. HURLEY. I have that information here; I will give you that in a moment [continuing reading]:

Of the total number of yards in existence on April 27, the capacity of the following yards was largely absorbed by the needs of the Navy Department for destroyers and mine sweepers, and by private contracts:

Bath Iron Works, Bath, Me.
Fore River Shipbuilding Corporation, Fore River, Mass.[1]
New York Shipbuilding Co., Camden, N. J.[1]
William Cramps & Sons Shipbuilding Co., Philadelphia, Pa.[1]
Newport News Shipbuilding Co., Newport News, Va.[1]
Seattle Drydock & Construction Co., Seattle, Wash.[2]
Union Iron Works, San Francisco, Cal.[1]
Alabama Drydock and Shipbuilding Co., Mobile, Ala.[2]
Todd Shipyards Corporation, New York.
Staten Island Shipbuilding Co., Port Richmond, N. Y.[1]
Standard Shipbuilding Co., New York, N. Y.[1]
Pennsylvania Shipbuilding Co., Philadelphia, Pa.[1]
Chester Shipbuilding Co., Chester, Pa.[1]
Pusey & Jones Co., Wilmington, Del.[1]
Baltimore Drydock & Shipbuilding Co., Baltimore, Md.[2]
Sun Shipbuilding Co., Philadelphia, Pa.[2]
Charles L. Seabury and Gas Engine & Power Co., Morris Heights, N. Y.
New Jersey Drydock & Transportation Co., Elizabethport, N. J.

It was therefore necessary, in order to meet the needs of the program fixed, to construct not only new yards for the building of wooden ships, but also to construct additional yards for the construction of steel ships. The plan developed by our predecessors to standardize ship design and to build these standard ships in large numbers in specially equipped yards in which the assembly of material fabricated in existing structural steel and machine shops in the country could be carried on, is sound and will give a tremendously increased ship production at relatively small expense for new construction, and without carrying with it excessive labor congestion at the yards.

A considerable portion of the effort of the organization has thus far been directed toward the completion of these so-called fabricated and other newly organized plants, the money expended up to December 1 for this purpose being $9,651,000. I am happy to say that the first three keels in these plants will be laid this month and that the progress of the work of the yard construction itself is such that we can promise fairly full operation during the spring of 1918. The fact that hulls have actually been completed within 64 days on the Pacific coast gives bright promise of the large capacity which these fabricated yards are bound to turn out. I am mentioning this largely to indicate that the work thus far has been in many cases preparatory and that it has carried with it the usual amount of annoyances and disappointments, but this period of preparation is getting rapidly behind us and the period of actual ship construction in full accordance with our plans is immediately before us. As an indication of the progress which is being made in expanding the shipbuilding capacity of the country, permit me to say that the tabulated reports received from the various shipbuilding companies for the nine weeks beginning with October 6 show that out of 109 plants

[1] Ships requisitioned. [2] Ships under contract.

reporting the total number of employees for the week ending October 13 was 102,769, for the week ending December 8, 149,270, an increase of 45.2 per cent during nine weeks.

It must be borne in mind that all the shipbuilding effort is not confined to the shipyards, but that a very large portion of the propelling machinery, winches, steering gears, and other accessories are built in manufacturing establishments of the various industrial districts of the country, and these establishments are contributing thousands of operatives to the very respectable totals above given. This increase in labor employed is not due to the completion of new yards alone but indicates the success we are having of adding a second and even a third shift to existing shipyards which formerly were running only a single turn. We are thus tremendously intensifying the output of existing facilities in addition to the construction of new facilities wherever conditions and the capacity of the men behind the proposition justify it. In an organization that must be rapidly expanded to take care of rapidly increasing needs there must of necessity be sufficient elasticity, and, if need be, change so that the organization will be made responsive to the demands made upon it. As the pressure on our organization has increased, we have subdivided functions and added departments, and we are at present engaged in a further scheme of expansion so that annoying delays and errors of the past may be avoided in the future. Such organization as is being added contemplated largely a more direct supervision of the material and labor supply and has for its object the coordination of both to the general plan of construction which we have in mind, so that the greatest possible output of the existing and shortly to be added facilities will permit.

The task of the Emergency Fleet Corporation is not only the construction of new ships, but more particularly the fabrication of new facilities and the construction of new yards in which new ships could be built. It is only fair to state that with the tremendous expansion of the industry with the relatively few experienced organizations available, and the relatively small number of experienced workmen heretofore employed in our shipyards, some time must be granted for the proper expansion and development of the necessary labor and directing forces to man the newly created facilities. Time is necessary in the case of any organization both for the gathering of the necessary experience and for the development of the necessary team spirit so essential to successful operation, and it is hardly fair, therefore, to say that the newly created facilities shall from the very day they have been put into operation produce ships at the maximum capacity. According to the figures of the construction department of the Emergency Fleet Corporation, 1,427 ships of 8,573,108 dead-weight tons are under construction and under contract. Of these, 431 ships of 3,056,000 tons were already under construction or under order by private or foreign owners when the commandeering order went into effect on August 3d. The new tonnage of steel ships ordered is represented by 559 ships of 3,965,200 dead-weight tons. The wooden ships for which contracts have been placed represent 379 bottoms of 1,344,900 dead-weight tons, and there are in addition 58 composite ships of 207,000 dead-weight tons. The output of the various yards will increase progressively, as experience grows and man power is increased. This is a well-known fact in the growth of

every new industry, and it is idle, in making predictions of the coming year's ship production, to lose sight of the greatly augmented production which the newly created facilities and growing experience will bring about.

As a record of accomplishment, let me add that since the requisitioning order went into effect on August 3d, 49 vessels of a total of 300,865 dead-weight tons have been completed and put into service.

Senator JOHNSON. I have observed you use the term "dead-weight tons." Would you explain the difference between dead-weight and gross weight?

Mr. HURLEY. Gross tonnage is the total cubical capacity of the entire hull, a unit of 100 cubic feet represents a ton. Lead-weight tonnage represents the actual weight of any kind of cargo which the vessel will carry to a certain depth or draft in the water. This point is always assumed to be the safe limit of loading.

Senator NELSON. These contracts that you refer to, are they what you would call tonnage contracts or percentage contracts? By those expressions, I mean, the percentage contract is where you make a contract with a man that you give him a certain percentage on what it costs him to build, and a tonnage contract is where you pay a man so much per ton; now what are these contracts, percentage contracts or tonnage contracts?

Mr. HURLEY. They vary. The flat price contract—you say that you will build a ship for so much, dead-weight; now we may provide in that particular contract to take care of any increase over and above the labor scale at the time the contract was signed. We do not have any cost plus contracts. That is, you build a ship for $1,000,000 and you get 10 per cent on that. We have a division in that contract—we reduce the percentage. The Navy is building some of its ships on a cost plus basis. Our contracts vary. Mr. Goethals placed a number of contracts at a flat price and some on a percentage basis. Admiral Capps made a number of contracts at a flat price and others on a definite fee basis.

Senator JONES. Please explain what you mean by percentage basis. I do not understand that yet.

Mr. HURLEY. In the early days of the corporation a few contracts were let on the basis of the contractor's receiving the actual cost of the vessel plus a profit of 10 per cent. The next step was to let contracts on a cost plus a fee basis, the contractor to be paid the actual cost of the vessel plus a fixed fee for his services.

The agency form of contracts in principle are as follows:

The contractor to construct the vessels at a plant owned by the owner on a cost plus sliding fee basis, the fee stated being approximately 5 per cent of the estimated cost of the vessels, with a provision, however, providing for the reduction of the fee in case the cost of the vessel exceeded the estimated cost, the minimum fee being approximately 4 per cent of the estimated cost. The contract also provided for an increased fee in case the actual cost of the vessel was less than the estimated cost. In this connection it is noted that in such case the saving effected was divided in three parts, one part was to go to the corporation, one part to the contractor, and the remainder to be distributed among the workmen.

For some time past the corporation has favored a straight lump-sum basis form of contract, in some cases with certain protections

against increased material and labor costs. Where the probable cost of work is not known, however, and can not be agreed upon the corporation has entered into a few contracts with reliable yards under a cost plus fixed fee basis, the fee named being about 10 per cent of the estimated cost.

Senator JOHNSON. It was suggested that perhaps the difference between gross weight and dead weight might not be explained. Please explain that a little further.

Mr. HURLEY. The dead-weight tonnage is about 50 per cent greater than the gross tonnage on cargo vessels. A cargo ship of 7,500 tons dead weight is about 5,000 tons gross. We figure dead weight in this country in all our contracts, and in England they figure gross. The dead-weight is the total carrying capacity of the ship, everything she can carry—coal, stores, freight.

Senator MARTIN. You mean by dead weight the weight a ship can carry?

Mr. HURLEY. Yes, sir.

The CHAIRMAN. The displacement in cubic feet when floating in salt water divided by 35, and by 36 in fresh water, gives you the total weight of the ship and cargo in tons—35 cubic feet of salt water weighs 1 ton.

Senator JONES. Can you tell us when you expect the last ship on the contract to be completed?

Mr. HURLEY. No; I can not tell.

Senator JONES. You do not expect them to be completed this next year?

Mr. HURLEY. It depends on conditions; 300,000 tons of the amount I have given here is in recent contracts; part of it is in the Alexandria contract. That is just started; they have taken an old shipyard over there.

Senator JONES. Have you any limit of time upon the completion of these ships, or any of them, under those contracts?

Mr. HURLEY. Yes.

Senator JONES. If so, can you give me an idea of how many have a limited time within which to be constructed?

Mr. HURLEY. On the Senator's suggestion, when it comes to the amount of tonnage we are going to deliver, I would like to show you all the figures we have on that and would like to have that private.

Senator NELSON. I would like to know how many ships have been actually completed since the board was created; that is, have been actually completed and built under your auspices, and how many vessels you have commandeered have been put forth; I mean actually put into service. But you may regard that as confidential——

Mr. HURLEY. Oh, no. Forty-nine ships, of 300,000 tons capacity, in service now, put in service since August 3.

Senator NELSON. Those are commandeered ships?

Mr. HURLEY. Yes. The first Emergency Fleet Corporation ship was built in 64 days in Seattle, and it was an 8,800-ton ship. She will be in service the day after Christmas.

Senator NELSON. Most of those commandeered ships were English or Norwegian ships, were they not?

Mr. HURLEY. I have the figures; I can give you the figures in regard to that.

Senator NELSON. No matter about that. But outside of those you have commandeered, how many ships have been built under the auspices of the Shipping Board or corporation?

Mr. HURLEY. We have launched four ships—two of steel and two of wood. We have a number of ships in the course of construction that will soon be launched.

Senator NELSON. But that one at Seattle is not completed?

Mr. HURLEY. No. Of course, the keels of those ships were not laid until June and July, and a number of the new yards did not have the facilities. We could not get into the old yards because they were filled up with the foreign ships and by the Navy, and so in order to build these ships we had to build new yards, unless we found a yard that was ready to take on new contracts. Seventy-four new yards were started by the Emergency Fleet Corporation, in order to have an opportunity to build ships.

Senator NELSON. So practically all the ships you have got are commandeered ships?

Mr. HURLEY. Yes; outside of those under construction.

Senator NELSON. That you took from the outside parties that built them?

Mr. HURLEY. Yes.

Senator NELSON. Do you not think we could have gotten those ships with lots less machinery and less expense, those commandeered ships, than it has taken to get them from your board? It was simply a matter of taking them over, commandeering them, it was a simple matter?

Mr. HURLEY. It was; we took them over and paid for them.

The CHAIRMAN. In your statement you have quite an item arising from charters, and hire of vessels. Did you charter those commandeered ships or do you operate them?

Mr. HURLEY. We have been turning most of them over to the War Department.

The CHAIRMAN. You have here $4,212,360.63.

Mr. HURLEY. That item is for charter hire and freight from ex-German and ex-Austrian vessels and is not earnings from commandeered or requisitioned ships.

The CHAIRMAN. And you derived that much from that source?

Mr. HURLEY. Yes.

Senator JOHNSON. And you requisitioned ships from our own people here?

Mr. HURLEY. Yes. We control all the shipping.

Senator JOHNSON. Did you have anything to do with these interned German vessels?

Mr. HURLEY. Yes; of those that the Navy did not take over, we repaired 500,000 tons. That was the emergency proposition. The boilers were in bad shape and they had to be rebuilt.

Senator JOHNSON. Those are in service now?

Mr. HURLEY. Yes; all but two or three.

The CHAIRMAN. Who determines the types of the various ships; for instance, beginning with the wooden ship?

Mr. HURLEY. Our naval architect, Mr. Ferris.

The CHAIRMAN. Is he still with you?

Mr. HURLEY. Yes.

The CHAIRMAN. How long has he been with the board?

Mr. HURLEY. He has been with it since he was appointed by Mr Goethals. He was the appointee of Gen. Goethals, and Admiral Capps kept him.

The CHAIRMAN. You mean that he decided the question of the various types of ships that the board ordered?

Mr. HURLEY. Mr. Ferris designed the Ferris type of wooden ship, a 3,500-ton ship, that is standard. Then he designed a 5,000, a 7,500, and an 8,000 ton ship.

The CHAIRMAN. And the composite ship?

Mr. HURLEY. The composite ship is the steel frame with wooden——

The CHAIRMAN. What is the tonnage of those ships?

Mr. HURLEY. The composite ships are 3,500 and 4,000 tons.

Senator Nelson. Are you building any cement ships?

Mr. HURLEY. Yes. A 4,500 cement ship is being built in San Francisco. We are following that very closely.

Senator NELSON. What is that tonnage?

Mr. HURLEY. 4,500 dead-weight tons. We are not building that; that is private capital.

Senator NELSON. But you let the contracts?

Mr. HURLEY. No; we agreed not to commandeer it if it was successful. That is the only thing we are interested in. We gave permission to them to build it on account of it being an experimental ship.

Senator HARDING. Apropos of that, the Shipping Board has put a ban on all private contracting throughout the country, has it not?

Mr. HURLEY. That is the assumption. As a matter of fact, we are simply exercising control.

Senator HARDING. Has that policy proven a contribution to the shipping of the country?

Mr. HURLEY. Well, at the moment, on account of the labor situation, on account of the shortage of timber, and not being able to carry out our schedules as rapidly as we would like, we felt that it would be a great mistake to have private parties, particularly foreign Governments, come in here and build either wood or steel ships, and interfere with our labor question. We upset the labor situation ourselves by starting the new yards, and if a foreign country were to place a contract for ships at a high price, the builders could go into the market and hire every man they could and take our materials and pay a premium. We must control it in order to carry out our program. It is a very hard thing for a private shipbuilder for us to turn him down and say, "You can not do this," but we were forced to do it for our own protection.

Senator HARDING. You were doing that to guard against an increased expenditure on shipping through private contract?

Mr. HURLEY. Yes.

The CHAIRMAN. What is that limitation, what is the exact wording about that?

Mr. HURLEY. Well, we have not any exact rule. Here is what the foreign Governments want: England wanted to order 28 wooden ships from a private shipbuilder, and they would not place the order unless we would agree not to commandeer the ships. We would

have to agree to let the English flag fly on those ships, and we felt it would be a great mistake, not knowing what our requirements would be later, to waive that and allow England to build these ships, not only upsetting our market on materials and on labor, but agreeing not to commandeer the ships after we had commandeered all the ships from other Governments prior to that.

The CHAIRMAN. Will you allow me?

Senator HARDING. Certainly.

The CHAIRMAN. That was in reference to foreign contracts; but suppose an American citizen wants to contract with a shipyard to build ships. What is your control over that situation?

Mr. HURLEY. Well, unless he can show that he has plenty of timber, we refuse to give him permission——

The CHAIRMAN. As to any size whatever?

Mr. HURLEY. Well, we have established a 3,500-ton, a Ferris type. If they could satisfy us that it would not interfere with our timbers—it is a serious situation getting this lumber for the present schedule; we have 1,500 carloads of fir now coming from the Pacific coast, for the purpose of finishing the wooden ships on the Gulf and the Atlantic coast, which the Southern Pine Association agreed to furnish lumber for, but which they can not do, and that has retarded that work. They just have not got the extremely large timbers required for a 3,500-ton ship.

Senator NELSON. On the Pacific coast?

Mr. HURLEY. Oh, they have it on the Pacific coast, and we have let contracts there recently because they have the timber there. They have not the large timbers in sufficient quantities in the South.

If Senator Fletcher, for instance, came to the American Ship Building Co. and wanted a ship, you would fix the price?

Mr. HURLEY. Yes; you would have to submit the price to us, and we must approve it before you could take the contract.

Senator HARDING. And that has confessedly decreased production very much, has it not?

Mr. HURLEY. Do you mean for the private yards?

Senator HARDING. Well, has it not had the tendency to decrease the output of these yards?

Mr. HURLEY. Well, we are planning to keep every yard running to its maximum. We do not know of any yards that are short of orders, any ways that are vacant in the country, there are none to my personal knowledge; they always figure four or five months ahead for their contract, so that when one ship goes off the ways they have an order to take its place, and I do not know of a vacant way in this country waiting for an order, and we would rather have them filled for the Government than for private parties.

The CHAIRMAN. How many ships do you allow on the ways? For instance, suppose a man has nine ways, how many ships will you allow him to contract for? You have reference to that, have you not?

Mr. HURLEY. Yes; I will tell you, Senator, on the Pacific coast they have been breaking all records. Where it requires four and five and six months to launch a ship from a way, of course they have to have more ways. These fabricated ships they are figuring on launching very quickly, probably in 70 days; that is their plan, and

in that way they turn out a large volume. But it all depends on the locality. On the Great Lakes they launch a 3,500-ton ship in 65 to 70 days. They will launch an 8,800-ton ship in San Francisco, Seattle, Los Angeles, or Portland in 75 days. And the minimum has been 64 days, and they now have a ship on the ways just started, laying the keel, in Seattle, and they are figuring on launching it in 50 days. That is an 8,800-ton ship.

Senator NELSON. They are steel ships?

Mr. HURLEY. Yes.

Senator HARDING. Do you have a policy of paying a bonus for expedited work?

Mr. HURLEY. Yes; we are doing that now; instead of increasing the wages we have allowed a 10 per cent increase in wage where a man would work 48 hours a week.

The CHAIRMAN. How many wooden ships are contracted for now?

Mr. HURLEY. 379.

The CHAIRMAN. And those are all 3,500 tons?

Mr. HURLEY. All 3,500-tons ships.

The CHAIRMAN. And what do they cost?

Mr. HURLEY. The hulls cost about $300,000 and the machinery about $200,000 installed.

The CHAIRMAN. About $150 a ton?

Mr. HURLEY. $500,000.

The CHAIRMAN. About $150 a ton?

Mr. HURLEY. About $140 a ton.

The CHAIRMAN. How many of the composite ships?

Mr. HURLEY. Of the composite ships we have 58.

The CHAIRMAN. And what tonnage?

Mr. HURLEY. Two hundred and seven thousand.

The CHAIRMAN. Are they all different tonnage, or do they run——

Mr. HURLEY (interposing). Three thousand five hundred tons and 4,000 tons.

The CHAIRMAN. The composite ships?

Mr. HURLEY. They cost $133 a dead-weight ton.

The CHAIRMAN. And how many steel?

Mr. HURLEY. Five hundred and fifty-seven.

The CHAIRMAN. And they cost how much?

Mr. HURLEY. $166 a dead-weight ton.

The CHAIRMAN. So the wooden cost us about $140 for complete ships and about $84 for hulls only, the composite about $133, and the steel about $160 a ton?

Mr. HURLEY. Yes. Wood and composite vessels can only be constructed of small carrying capacity, and while of somewhat less cost per ton than steel ships they are much less economical to operate and much less durable.

The CHAIRMAN. That is that much per ton?

Mr. HURLEY. That is the average; yes.

The CHAIRMAN. And those steel ships are of what size?

Mr. HURLEY. Five thousand, 7,500, 8,800, and some 9,000.

The CHAIRMAN. Is there any reason for having those vary in tonnage?

Mr. HURLEY. Nothing, except that we do not have any two different standard ships in any one yard, like the old way of having 10

different kinds of ships in the same yard. We try to keep one standard ship in a particular yard. If you have a contract for 10 ships you would have 10 of one kind, outside of a tanker or two that you might take.

The CHAIRMAN. Well, ordinarily a man would take, say, an 8,800-ton ship and he would just as soon have it 9,000 tons, or say 9,400, he would just as leave have it 8,800? Ordinarily, where you can handle an 8,800-ton ship you can handle a 9,000 ton ship?

Mr. HURLEY. Yes.

The CHAIRMAN. Would it not have saved time if you had agreed on a standard of 9,000 tons and prepared your plans and specifications for that ship, and had them ready in the office, so that any bidder could come there and get those plans and specifications and bid on that ship, rather than have him go out and prepare plans and specifications for different sizes?

Mr. HURLEY. I think the standardized ship would be a good thing, but some of these yards could not build—of course, on the lakes we have to have a small ship because we can not get it through the canal if it is very large. Three thousand five hundred tons is the limit there. In some of the yards the ways would not take a 9,000-ton ship. So in order to expedite matters—I am only reviewing what Mr. Goethals and Admiral Capps planned; I did not get into the designing of the standards. But the tendency is for the larger-sized cargo ship; that is most economical to operate.

Senator NELSON. But each group could be standardized, I suppose?

Mr. HURLEY. Oh, yes; they do not vary at all.

The CHAIRMAN. Coming down to the practical working of things, you want to build ships. Say I want to contract to build ships; that is, I am willing to go into that business. I come to you to find out what kind of ships you want built, and see if I can make a contract. What is the process; what is the procedure; to whom do I go and take that matter up first?

Mr. HURLEY. You take it up with the general manager.

The CHAIRMAN. The general manager?

Mr. HURLEY. Yes.

The CHAIRMAN. Then what does he do?

Mr. HURLEY. He will refer you to the contract manager, the contract department.

The CHAIRMAN. Who has charge of that?

Mr. HURLEY. Mr. Radford.

The CHAIRMAN. He is connected with the Navy?

Mr. HURLEY. Well, not recently; he has been away from the Navy for three or four years; he has been out in business, in the manufacturing line.

The CHAIRMAN. Where has he been manufacturing?

Mr. HURLEY. I think he was in some of the munition plants. He is a contract man; drew contracts for the Remington Arms and some of the large manufacturing establishments. He was formerly a naval constructor.

The CHAIRMAN. I take it up with him. What does he do?

Mr. HURLEY. Submits complete standard plans and specifications for the type of ship you can build, and then you figure what you can do.

The CHAIRMAN. Do I have to get the design and the plan?

Mr. HURLEY. The blue prints and everything are furnished; he has them right there.

The CHAIRMAN. He hands them to me?

Mr. HURLEY. Yes.

The CHAIRMAN. Then I take those and prepare my bid?

Mr. HURLEY. Yes.

The CHAIRMAN. Then what is the next thing I do? I submit it to somebody?

Mr. HURLEY. Our contract man that you got your blue prints and specifications from.

The CHAIRMAN. What does he do?

Mr. HURLEY. He investigates your financial standing, and your ability to do things and what your experience has been, and whether you have any men about who knows something about shipbuilding, whether you are going to employ a lot of men away from the other shipbuilding plants; those things are checked up, and if your prices are right, and your responsibilities are such that you are entitled to a contract, the matter is taken up with the general manager, and you go in with the general manager and discuss the terms and everything; and then he works with the contract department and ascertains to his satisfaction that you are the right man to take this contract, and if you satisfy the general manager he approves of it and you get your contract.

The CHAIRMAN. And the general manager then passes the contract up to you?

Mr. HURLEY. To the president; yes.

The CHAIRMAN. And you sign it?

Mr. HURLEY. Yes.

The CHAIRMAN. So that, in the first instance, the matter might have stopped with Mr. Radford if he concluded that he did not like the showing that was made; and in such case that would end it?

Mr. HURLEY. Oh, no; you could appeal to me; we are glad to see everybody, and we do see everybody down there.

The CHAIRMAN. Now, it ought not to take a great deal of time from the time I get the plans and specifications, and I ought to be able to make my bid the next day. It ought not to take a great length of time for Mr. Radford to determine whether or not I would be entitled to a contract.

Mr. HURLEY. If you are an old established shipbuilder, it does not require much time, but if you are going to build a yard the district manager in that locality is told to investigate, probably telegraped to, to investigate the site. We have had a few cases where a yard was not desirable, and the man that came up thought he could build ships in a particular place, and we are very anxious that the district managers should look the ground over, or their engineers, and then report. That might delay it. But a standard shipbuilder, a man who understands the game, does not require much time.

The CHAIRMAN. Has Mr. Radford much force under him?

Mr. HURLEY. It is being expanded rapidly to relieve him.

The CHAIRMAN. How many of these district officers have you?

Mr. HURLEY. Ten district officers; we are going to add a few more and divide up some of the districts to relieve them.

The CHAIRMAN. What are the duties of the district officers?

Mr. HURLEY. The district officer is the local representative of the Emergency Fleet Corporation. Under him are inspectors. If you are building ships you have a payment coming due and you can not receive that money until the district officer has inspected that work and approved of the payment to the main office.

The CHAIRMAN. Has he authority to make contracts?

Mr. HURLEY. No; he can make suggestions.

The CHAIRMAN. In the way of purchasing material or anything of that sort; he has nothing to do with that?

Mr. HURLEY. No; that is purchased by the individual contractor anyway; unless it is engines and boilers that we may be buying through our purchasing department.

Senator NELSON. Do you have any superintendents or inspectors present at these yards?

Mr. HURLEY. Oh, yes.

Senator NELSON. To see the construction of the vessels right along?

Mr. HURLEY. Yes, sir.

Senator NELSON. Every ship?

Mr. HURLEY. Every ship.

Senator NELSON. You call in inspectors?

Mr. HURLEY. Inspectors under the district officer. The district officer may have three or four cities; there are inspectors in all yards.

Senator HARDING. Suppose the Emergency Fleet Corporation contracts with me as a shipbuilder for, we will say, ten vessels of a given type. The contract is completed; may I as the manufacturer then proceed and build those without any further interference from the Fleet Corporation?

Mr. HURLEY. You mean after the contract is drawn and the specifications submitted by you?

Senator HARDING. Yes.

Mr. HURLEY. That is what should be.

Senator HARDING. That is not quite what I asked. I asked if that is the case, if a private manufacturer is allowed to go ahead and complete his contract?

Mr. HURLEY. Under the supervision of the district manager and inspector.

Senator HARDING. I will be perfectly frank as to why I asked the question, and I think it is important to develop it. I get a complaint from the contractor that the difficulty in the matter is due to harassment and changes of plans after the contracts are made.

Mr. HURLEY. I think that is true; that that has been the case.

Senator HARDING. That has existed heretofore?

Mr. HURLEY. Yes, sir.

Senator HARDING. But that is being corrected now?

Mr. HURLEY. Yes, sir; as rapidly as we possibly can.

Senator HARDING. A moment ago we were talking about wooden-ship contracts. I do not care to go into the old controversy, but you are building approximately 250 wooden ships?

Mr. HURLEY. Three hundred and seventy-nine.

Senator HARDING. I came within two-thirds of it. You are building the type originally designed by Mr. Ferris?

Mr. HURLEY. Yes.

Senator HARDING. Was there a failure of the original design?

Mr. HURLEY. The original schedule was not complete. In the specifications stating the amount of material they did not put in sufficient materials. Later they found it would have to be strengthened in several places.

Senator HARDING. And enlarged the keel?

Mr. HURLEY. Yes; and it required an additional number for that as well as for the shortage in the original schedule.

Senator HARDING. Is it true or not that the changes reduced the cargo capacity 700 tons per ship?

Mr. HURLEY. I think it will reduce it somewhat; I do not know the exact amount; I have heard different figures stated. It will reduce it. The estimate is about 150 tons.

Senator HARDING. Well, was this change in plan developed after we had our controversy between wood and steel vessels or after the failure of the first ship launched?

Mr. HURLEY. It was during the course of construction, when some of the builders did not know anything about building wooden ships, and started to ask a lot of questions, and some of those that knew something about it asked questions, and Mr. Ferris arrived at the conclusion that he should strengthen, and issued an order to that effect.

Senator JOHNSON. That was about when, if you please.

Mr. HURLEY. I think that was about two months ago. I am guessing a little at that.

Senator HARDING. Then we will be disappointed to the extent of a quarter of a million tons in the wooden-ship program, if that reduction of cargo capacity is as I have stated it?

Mr. HURLEY. If it is 700 tons on the carrying capacity, yes. That amount has been questioned, but I am not prepared to say that it is not the correct figure. As I said, it is estimated at 150 tons.

The CHAIRMAN. Then the changes in design, in these specifications, were all made in the judgment of Mr. Ferris, or does he submit that to the board?

Mr. HURLEY. Admiral Capps and Admiral Bowles and Mr. Ferris had the changes made. Mr. Ferris made the changes in connection with Admiral Bowles and Admiral Capps.

Senator JONES. Just a moment in connection with what you were asking a moment ago about getting those contracts. If a man comes for a contract, or goes to Mr. Radford, and he wants to make an investigation, as to his experience, and so on, that is referred out then to the district man?

Mr. HURLEY. Yes.

Senator JONES. Is his report final, whether favorable or unfavorable?

Mr. HURLEY. No.

Senator JONES. The board is following a different policy now from that inaugurated in the first place?

Mr. HURLEY. The Board of Trustees does not take any part in the management of the property; they could not.

Senator JONES. Well, the manager——

Mr. HURLEY. Yes.

Senator JONES. Would his report be final whether favorable or unfavorable to the shipbuilder?

Mr. HURLEY. What happens is this: If you come in there and you finally get a report from the district manager that is unfavorable, naturally you want to talk to some one higher up.

Senator JONES. Yes.

Mr. HURLEY. And 99 out of 100 times they get to my office, and we investigate and find out. We are keen to have men build ships, first, and to contract with good companies. We encourage them. We have a case in San Diego now where a very responsible concern in submitting their figures to build 15 or 20 steel ships.

Senator JONES. So the report of the district officer is simply advisory?

Mr. HURLEY. Yes; chiefly from an engineering standpoint; to make sure that the place where the ship is going to be built is all right, and then the financial part of it; we have the banks and others to approve it.

Senator JONES. As I understand, you are still letting contracts for wooden ships?

Mr. HURLEY. Yes.

Senator JONES. Then the impression that got out sometime ago is erroneous.

Mr. HURLEY. Now, here is the point. Where you have a wooden-ship yard and you want to build wooden ships, we are in favor of that: or you want to expand a wooden-ship yard and you have your organization, we are in favor of that. We have no desire to retard the progress of wooden-ship building. If you are in that business, we would encourage you to go ahead and build wooden ships; but if Smith or Jones came and wanted to start a new wooden-ship yard, we would be reluctant about letting them start, even on the Pacific coast, where they have the timber. We have allowed a contract or two in the South, where they also have the timber, directly connected with their shipbuilding yard. We watch that carefully. In the same way in the steel-ship yards we are trying to expand the present shipyards we now have and add two or three ways to old shipyards, and also the new ones that have been erected and are building ships. We have a plant on the Pacific coast, the plant of Moore & Scott, at Oakland, where we are building 7 ships now, and 16 more next year. Where their plant is was nothing but a prairie in January 1, 1916. We have encouraged that plant.

Senator JONES. Here is one particular case I want to call to your attention now. A little over a month ago I was out in Tacoma and there was a company there that was building all wooden ships. They stated that they were in the private shipping business, building small ships, and they did not care for any Government contracts; but that the Government officers urged them to go into Government work, and finally they said to the Government officers that if the Government would give them a contract for two wooden ships, they would change their plant and go into that work. Well, they said all right. But when the contract was prepared there was a contract for only one wooden ship. The Government officers said "Go ahead and we will give you another one." They granted the contract for the one wooden ship. They have a big crane that could

be used on another way as advantageously as the one they have, and they were unable then to get a contract for another ship.

Mr. HURLEY. Why?

Senator JONES. The department would not give it to them.

Mr. HURLEY. There must have been some reason.

Senator JONES. No; they did not give any reason.

Mr. HURLEY. Do you know the name of that concern?

Senator JONES. I think it is Barbar Brothers.

Mr. HURLEY. I will be glad to look it up.

Senator JONES. I was satisfied you would.

Mr. HURLEY. I am apprised they placed an order for one wooden ship. They have 73 men and two ways, one occupied by the Government contract and the other vacant.

Senator JONES. Yes; they could not get a contract for another ship, and they wanted it. They have steel piled up there idle for the ships. They have only 73 men; but they can do the work practically as advantageously on the other ship as on the one ship. That is what they are complaining about.

Mr. HURLEY. I will be glad to look that up and give you any information I have in regard to it.

The CHAIRMAN. Generally, you can allow two ships for each set of ways.

Mr. HURLEY. Yes; they have a big crane they can use handling things for two as well as for one vessel.

Senator HARDING. In furthering the development of private yards, we will say any new enterprise, do you plan in the contract a profit which can be used to amortize the investment made for this special service?

Mr. HURLEY. We have that matter up now, where a man wants to expand his yard and expend two or three million dollars. We are preparing a statement to the Treasury Department, covering a period of five years. Now, he does not need the addition, but he is putting up his addition for the purpose of building ships for the Government, say to the extent of $5,000,000 investment, and at the end of five years he ought to have some chance to show depreciation, say of 20 per cent or 10 per cent, and then appraise it at the end of that time. Several plans have been started but none adopted as yet.

Senator HARDING. I asked you the question because on the Great Lakes we have some very notable shipbuilding plants, and they are building for your Emergency Fleet some 60 or 75 thirty-five-hundred-ton ships and three-thousand-ton ships. They have none of the problems of housing workmen that you have on the Atlantic coast, their plants and equipment are quite ample for the shipbuilding trade of the Great Lakes; but as a patriotic performance they are perfectly willing to step in and build for this emergency. But they have been denied any sort of profit that could be applied to the amortization of the investments which would become useless after the war. That is why I ask whether it is the policy of the Shipping Board or the Emergency Fleet Corporation to encourage that sort of industry.

Mr. HURLEY. We have not acted upon it, but it is worthy of consideration, and we are trying to settle a number of claims now of contracts that are on our commandering order. For example, a shipyard building five ships for a foreign Government, say the New

York shipyard. They took the contract for $65 or $75 a ton a year and a half or two years ago and then found they were going to lose money on account of the war coming on and let contracts for four stock ships—what we call a stock ship—for themselves and sell on the market, for which they would receive from $70 to $75 a ton, if we had not commandeered them, to save their losses on the first five ships and probably get out at a profit. We came in and commandeered nine ships. We took them at the cost price. Of course, they are out quite a bit. We are readjusting that in letting new contracts to them and getting tonnage at a very low figure.

Senator HARDING. Apropos of the commandeered ships, there is a current publication that since Congress provided for the seizure of ships a number of vessels built for neutral powers or for citizens of neutral powers have been ollowed to go into their service, although we had a commandeering authority to put them in service under the American flag. Is there any truth in that statement?

Mr. HURLEY. Well, we took office July 27 and the commandeering order went out on August 3. There were two ships for the British and two for the French and one for Norway ready on that day, and we allowed those five to go, but we have not allowed any to go since then.

Senator HARDING. None launched since then.

Mr. HURLEY. No.

Senator NELSON. Were there not some before that that went?

Mr. HURLEY. Yes; but the order was not in effect.

Senator NELSON. But was there not a large number that were ready before that, vessels that were ready that they allowed foreign governments or citizens to take away?

Mr. HURLEY. Of course, any ship that was built; they were allowed to take away any time before August 3. As for the number, I am not familiar with it.

Senator NELSON. I wish you would look it up and let us know how many ships would have been saved here if the board had moved. I mean after the board was organized, how many ships they could have saved for the Government if they had tried to if they had resorted to commandeering?

Mr. HURLEY. There were 15.

Senator HARDING. You speak of the commandeering order as of August 3.

Mr. HURLEY. Yes.

Senator HARDING. The Congressional authority for that was passed much earlier, was it not?

The CHAIRMAN. It was provided for in the act of June 15, 1913.

Senator HARDING. That was the appropriation bill?

The CHAIRMAN. Yes.

Senator NELSON. It was really before that I think.

The CHAIRMAN. It was approved June 15. I have the act here.

Senator HARDING. Then, if there was failure to secure shipping built for citizens of neutral powers prior to August 3 it was a failure in some executive branch of the Government other than the Shipping Board?

Mr. HURLEY. No; it was up to the Shipping Board to issue their commandeering order, and Gen. Goethals on July 13, I think—he

did not issue any order but was about to issue an order when these differences came up, the differences between Mr. Denman and Gen. Goethals. I saw a letter wherein he stated that he was going to issue the order, but it was not issued when we came in, July 27, and we started and issued it August 3.

Senator HARDING. Well, through the controversy in the Shipping Board we did let slip a lot of shipping?

Mr. HURLEY. Some one did.

Senator JONES. The first authority for commandeering had come from the President.

Mr. HURLEY. Yes; July 11.

Senator JONES. What I would like to know is how many ships of that character got away between the passage of the act authorizing the President to commandeer ships, June 15, and July 11?

Mr. HURLEY. I will look that up and will be glad to let you know about it.

Senator NELSON. That got away?

Mr. HURLEY. That got away.

Senator JONES. What I would like to know is, between June 15 and the time of the order how many got away and the size of the ships.

Mr. HURLEY. Yes.

Senator JONES. And, if possible, to whom they went.

Mr. HURLEY. The different countries?

Senator JONES. Yes.

Mr. HURLEY. Yes; we have that.

The CHAIRMAN. The Executive order, you say, was issued July 11?

Mr. HURLEY. Yes.

The CHAIRMAN. And the board acted August 3?

Mr. HURLEY. Yes.

The CHAIRMAN. You spoke of the order having been issued August 3, I thought. You mean that was the order of the board?

Mr. HURLEY. Yes.

The CHAIRMAN. But the Executive order of the President came July 11?

Mr. HURLEY. Yes, sir.

The CHAIRMAN. Has there been any question raised, Mr. Hurley, about the smaller wood ships being suitable for the coastwise trade; I mean such as you are building?

Mr. HURLEY. No. They are sea-going ships.

The CHAIRMAN. In this appendix to the report appears a list of employees, compensation of employees of the United States Shipping Board. I take it that is not complete, not a complete list of all the employees of the Shipping Board, is it?

Mr. HURLEY. Not of the Emergency Fleet Corporation, but it is a complete list of the employees of the Shipping Board.

The CHAIRMAN. Is it a complete list?

Mr. HURLEY. Yes.

The CHAIRMAN. You have not given the employees of the Emergency Fleet Corporation?

Mr. HURLEY. I do not think we have. The number is 767.

The CHAIRMAN. That number refers to what, now?

Mr. HURLEY. To the Emergency Fleet. That includes our inspectors and engineers and our entire staff

Senator NELSON. District officers and all?

Mr. HURLEY. Yes.

Senator NELSON. That is of the Emergency Corporation?

Mr. HURLEY. Yes.

Senator NELSON. How many of your commission proper outside of that?

Mr. HURLEY. The number of men on the Shipping Board in addition to that, do you mean?

Senator NELSON. Yes, approximately.

Mr. HURLEY. About 60.

Senator NELSON. Now I wish you would prepare a list of all these contracts, giving the date of each contract, the name of the contractor, of the place where the ships are built, and then number your contracts and refer to them in the schedule. You do not care about having this private, do you?

Mr. HURLEY. No.

The CHAIRMAN. I understood that the design for the wooden ships now being contracted is the Ferris design?

Mr. HURLEY. Yes.

The CHAIRMAN. And that was modified somewhat from the original design first proposed?

Mr. HURLEY. Strengthened, Senator, in several places.

The CHAIRMAN. Was there some delay caused by that; that is, had some work started and then changed after the work was started?

Mr. HURLEY. Yes.

Senator JONES. Mr. Ferris was preparing the designs for steel ships.

Senator NELSON. Do you want this list confidential? I see it is marked confidential.

Mr. HURLEY. We can fix it up for you.

Senator NELSON. Be sure you put the locality of the yard and then also if you have advanced any money to them——

Mr. HURLEY. And how we advanced it; the method employed?

Senator NELSON. Well, whether you have advanced any money toward the construction of the yard, the enlargement of the yard, and, if so, how much in each case, so that we can see that at a glance.

The CHAIRMAN. It will be printed in the record.

(The matter referred to was subsequently submitted and is printed in full in the testimony of Admiral Bowles on page 14 of this hearing.)

The CHAIRMAN. In this list of employees you mention some that I might ask you about. "Special experts." What does that mean?

Mr. HURLEY. The duties of special experts correspond to those of "special experts" in other departments. Most of the "special experts" in the employ of the Board, however, are highly trained men in their respective professions. Such men are not obtainable through civil service.

The CHAIRMAN. "Examiner." What are his duties?

Mr. HURLEY. The duties of examiners of the Board are of a legal character. They are especially qualified to preside at conferences, take testimony, and submit their recommendations to the Board.

The CHAIRMAN. Would it take any time, if, for instance, you wanted ships built and the party desired to build ships, if he could go at once to Mr. Ferris and get the plans and specifications from

him, and then make his bid to the general manager and cut out all these intervening steps between the architect and the general manager?

Mr. HURLEY. I think that that would not expedite matters. Mr. Ferris is a technical man, and Mr. Radford has all the drawings. The man knows about the price of a ship he would like to build, and the delays on the start, Senator, were on account of the men that were bidding, and they did not know themselves what they wanted to do, and it required some time. That being reorganized and put on a sound business basis, that required some time, you can not do that in a short time with everybody rushing in. We have had hundreds of men who wanted to build ships that were honest and sincere in their desire, and who have never finished a ship and never will. We have a few dead ones that got contracts that will never finish a ship.

The CHAIRMAN. You will not have those difficulties hereafter when you have established your yards, and will have no occasion for delays you had to contend with at first?

Mr. HURLEY. No; but even with men who start out all right, we may have more or less trouble. We have to keep in touch with them.

Senator NELSON. Have you many instances in which you had contracts with individuals or corporations or firms who at the time you made the contracts with them really had no shipyards.

Mr. HURLEY. Yes; quite a few of them, but very few of them that have not turned out all right. We have watched them carefully, helped them.

Senator NELSON. Will you put that into your statement? Put those cases in where the men you made contracts with had no shipyards when you made the contract.

Mr. HURLEY. We had to build 74 new shipyards in cooperation with them.

Senator NELSON. That may be where you have helped them to increase their capacity; but suppose I came out of the woods in Minnesota and asked you to give me a contract for building ships on Lake Superior and I had not anything in the way of a plant, not even a homestead or a shack there. You would give me a contract, may be. In that case you would help me to build a yard, would you not; help me financially?

Mr. HURLEY. Yes.

Senator NELSON. Now, have you had many such cases?

Mr. HURLEY. Forty-two where they have been helped or will be helped.

Senator NELSON. Where they had no yards at all.

Senator SHIELDS. You could not well have new yards built by new parties going into business unless you agreed to give them work in the yards after they were equipped, could you?

Mr. HURLEY. Yes; we helped them.

Senator SHIELDS. You necessarily had to promise a contract or make contracts with them; no man would build a yard without some such assurance?

Mr. HURLEY. No.

Senator NELSON. In all those cases where you made those contracts were they practical shipsbuilders or were they simply general exploiters, or men who had not been engaged in shipbuilding?

Mr. HURLEY. We had very few cases where they failed.

Senator SHIELDS. I think he said he had some dead ones.

Mr. HURLEY. A very few, yes.

Senator JONES. When you say you helped them, do you mean you advanced them money?

Mr. HURLEY. Yes; and our district managers and inspectors watched every step, and they are going ahead to-day.

Senator JONES. Did you follow any rule as to what percentage you would advance?

Mr. HURLEY. As well as we could do so. We were pretty liberal to them, to some of them. You can not adopt any definite rule of that kind.

Senator JONES. Can you give any particular instance of this kind, of what help you gave and where that was?

Mr. HURLEY. We helped 42.

Senator JONES. I wanted to know whether there was any particular instance.

Mr. HURLEY. No.

The CHAIRMAN. How does that money come back; does it come back out of the contracts finally?

Mr. HURLEY. Yes. It applies on the contract. We advance them to start building and that applies on the contracts.

The CHAIRMAN. Then, in these cases up here you mentioned at Bristol and Newark and Hog Island, I understand you furnished the entire amount of money to build those yards?

Mr. HURLEY. Yes.

The CHAIRMAN. Is the title to that property vested in the Government—the title to the lands and the buildings and the whole thing?

Mr. HURLEY. The Government has a right to take over all those plants first, and then if the Government does not want them there is an appraisal made; but the Government has complete control over them all.

Senator JOHNSON. In your contract is there a time limit for construction?

Mr. HURLEY. In many cases we tried to have a time limit put in. It is pretty hard to force a man——

Senator JOHNSON. You have stated your program. Has that program been carried out with reasonable dispatch and diligence?

Mr. HURLEY. You mean from the day we started to the present time?

Senator JOHNSON. Yes, sir.

Mr. HURLEY. Not as fast as we would like to have it, but I think under the circumstances as quickly as it could be carried out.

Senator JOHNSON. Have there been any particular causes of delay?

Mr. HURLEY. Yes.

Senator JOHNSON. Will you state them, please?

Mr. HURLEY. The labor question first. For two or three months there was unrest, particularly on the Pacific coast. We had several strikes out there. We had strikes in many of the yards here, if not all the employees in a yard, at least departments of a yard, which demoralized and retarded the progress of the shipbuilding program. We have an industrial service now that we are endeavoring to help the shipbuilders with, particularly the small builders—and the large ones as well, because they require a great many men.

We have tried to improve that condition. We have employment bureaus. We have one in Seattle that has developed very successfully in the past four weeks, in connection with the Department of Labor. We have one started in Philadelphia, or, rather, about to start. The employers all agree to employ their labor through this central agency. Then when we go into the interior country, both on the west coast and in the interior, you know the shipyard employees are now exempt from the draft. We also have the power to draft from the Army experienced mechanics that are serving in the Army.

Senator JOHNSON. The difficulties of the labor situation, then are considerably minimized at the present time?

Mr. HURLEY. Yes.

Senator JOHNSON. Have any differences existing in the board interfered with carrying out the program?

Mr. HURLEY. Not since I have been on the board.

Senator JOHNSON. None of any sort?

Mr. HURLEY. No.

Senator JOHNSON. Chronologically, now, your advent was July 27——

Mr. HURLEY. Yes.

Senator JOHNSON. And with you came Admiral Capps?

Mr. HURLEY. Yes.

Senator JOHNSON. And Admiral Capps remained until when?

Mr. HURLEY. December 1.

Senator JOHNSON. He was succeeded by whom?

Mr. HURLEY. Admiral Harris.

Senator JOHNSON. And Admiral Harris remained how long?

Mr. HURLEY. Six or seven days; he did not come there until the 5th or 6th, and he left on the 14th.

Senator JOHNSON. And subsequently he was succeeded by whom, please?

Mr. HURLEY. Mr. Piez.

Senator JOHNSON. Now, so far as the Shipping Board is concerned, so far indeed as it has a related corporation, all has been done that is possible to carry out and execute this ship program?

Mr. HURLEY. As a corporation, an organization. Now, they have not as officers; we have not accomplished what we hoped to accomplish. Going over the same field, we would know more and probably increase the output in a number of places. But we had to go through that.

Senator JOHNSON. Were there any other causes that interfered with the execution of your program than the labor market?

Mr. HURLEY. No; that was quite general. At the present time we are in a fine position.

Senator JOHNSON. But what I ask is whether there was any cause in addition to that.

Mr. HURLEY. Yes; materials.

Senator JOHNSON. Will you state, please, in regard to that?

Mr. HURLEY. We have the transportation question; we are being delayed from time to time on account of the shortage of cars—more on the question of shortage of transportation than on the shortage of material. It is the same in the shipbuilding yards, but our traffic

board is improving that. We have a very efficient traffic board. The railroads also are trying to do everything they possibly can to help them.

Senator JOHNSON. You mean you have a traffic board connected with your board?

Mr. HURLEY. Yes; they follow up these particular shortages and have tried to get the cars moving.

Senator JOHNSON. Then, the program is well under way at the present time, is it not, with the prospect of being executed with the utmost dispatch?

Mr. HURLEY. Yes, Senator; I do not believe that we could add anything to it at the moment. We are going to expand and develop when the necessity arises, but we have the thing well in hand, and we are a going concern.

Senator JOHNSON. Pardon me, one other question. You have given us two reasons for possible delay or cause of delay in the execution of the program; first, labor; second, transportation. Is there any other cause that you recall?

Mr. HURLEY. In the wooden-ship building program there is the changing of the design.

Senator JOHNSON. That design was changed by whom?

Mr. HURLEY. By the mechanical department, after they found they did not have enough timbers for the decks and timbers large enough for the keels.

Senator JOHNSON. Was that mechanical department that made the change the same department as originally prepared the specifications?

Mr. HURLEY. Yes. There is another matter, and that is the housing problem. There is a shortage of houses in a great many of these shipyard towns, caused by this enormous expansion in this particular district. We are not troubled so much in the West, but we are very much troubled in the East on that account. At Sparrows Point we have a large shipyard, and they were short 3,500 men.

Senator JOHNSON. As I understood you as to the time ships will be put in the water, in the western shipyards, they run from 50 to 75 days. They can put ships in the water now continuously, apparently, can they not?

Mr. HURLEY. Yes, sir.

Senator HARDING. Have you done anything with the housing problem?

Mr. HURLEY. Yes. The counsel for national defense had a committee and recommended that the War Department, the Navy Department, and the Shipping Board work out some plan, and build houses for the different localities that required a great many additional men, and that were short of houses, and that as soon as that committee reported I took the matter up, and appointed a special practical man on housing. We will take Baltimore, for example. They wanted $6,000,000 to build additional houses at the Sparrows Point shipyards.

Senator HARDING. How far is Sparrows Point from Baltimore?

Mr. HURLEY. Only about 12 miles.

Senator HARDING. Is there convenient communication between those places?

Mr. HURLEY. I was just going to tell you about that, Senator. The Pennsylvania Railroad runs trains out there, and there is a street car line. This housing man found vacant houses in Baltimore. The housing question is as much a transportation matter as anything else, and 80 per cent of these men live in Baltimore that work in the Sparrows Point plant. By taking a couple of transformers that were tied up by the Government and putting them on the electric road it increased the transportation facilities to the extent of putting on 10 or 15 additional cars, and we had the Pennsylvania Railroad improve its service. After we find that the local conditions have been congested, the tendency at times is to let the Government do it, and we are applying the practical side of it and finding out all the facts, and then we will act on the housing problem, after the first practical step has been taken. We found 500 vacant houses in Baltimore.

Senator HARDING. In Baltimore?

Mr. HURLEY. Well, between Baltimore and Sparrows Point, some half way to Sparrows Point were vacant.

Senator HARDING. Available for workmen?

Mr. HURLEY. Oh, yes. We are using them now.

Senator NELSON. Mr. Hurley, will you please furnish the committee with a list of the strikes that have taken place in the shipbuilding yards?

Mr. HURLEY. I will be very glad to, Senator.

Senator NELSON. And the number of strikers in each case, and the class of work.

Mr. HURLEY. I shall be glad to do that, Senator.

The CHAIRMAN. And you are still engaged in letting contracts for wooden ships, composite ships, and steel ships.

Mr. HURLEY. No composite ships, Senator.

The CHAIRMAN. No composite ships?

Mr. HURLEY. It takes pretty near as much steel for a composite ship as for a steel ship.

The CHAIRMAN. Yes, but you get them a good deal cheaper?

Mr. HURLEY. Yes, some cheaper. They do not care to build them so much.

The CHAIRMAN. Are you now letting contracts for composite ships?

Mr. HURLEY. We have not been letting any recently. I do not know that we have given it up entirely.

The CHAIRMAN. The board still proposes to build some composite ships.

Mr. HURLEY. Probably not.

The CHAIRMAN. You are still going on with them?

Mr. HURLEY. Oh, yes.

Senator NELSON. Mr. Hurley, can you give us any information as to what Congress should do to aid you in expediting this work?

Mr. HURLEY. The housing problem is the most serious, and it is a rather trying position to place us in to determine that we should spend $15,000,000 or $20,000,000 on houses out of our shipping program. There has been some doubt about that. It is the main thing we would like to get your help on.

Senator NELSON. Is there any urgent requirement for building houses in all cases?

Mr. HURLEY. Well, in many cases there is. They have expanded; they have employed so many men and expanded, the factories are close together, and they have not any houses for their men.

Senator NELSON. In what localities is that?

Mr. HURLEY. Baltimore, Philadelphia, Bridgeport, Quincy, Chester, Wilmington, and many other places.

Senator NELSON. Do you propose to construct what might be called temporary buildings or would you build the expensive and permanent type?

Mr. HURLEY. That has not been decided on. We have not decided anything. This is the proposition we made to the Bethlehem Steel Co.; we would loan them 80 per cent on a 4 per cent basis of the total costs. They would furnish the land, and later pay us that money back, and then they would take a second mortgage on the other, but the corporation was to guarantee 80 per cent. They declined that.

The CHAIRMAN. Is there any trouble as to houses?

Mr. HURLEY. No; we have not had any outside of Newport News, and they are in a very bad way.

The CHAIRMAN. Are not the labor conditions favorable on the Gulf and South Atlantic coast, plenty of men and plenty of houses?

Mr. HURLEY. There are plenty of men there and plenty of houses.

The CHAIRMAN. Is there not an advantage in climate there over other portions of the country?

Mr. HURLEY. Yes; it is very much like the California climate. The men work a larger number of days in the month in the South.

Senator NELSON. Is it possible to get the men to work overtime? Can you get double crews to work on the shipbuilding?

Mr. HURLEY. That is our hope now, to have three crews, and that is what we are working on. We will have to do that.

Senator NELSON. If it can be done that will expedite the work a great deal.

Mr. HURLEY. That is the secret of the whole thing. Man power is what we need.

Senator NELSON. And you have that power now?

Mr. HURLEY. We are taking broad steps to secure man power now.

The CHAIRMAN. I have been told there is no trouble about getting any amount of labor in the south, and one reason for that is that there is a tendency for the men up here, particularly during the winter months, to come down to the milder climate. They are glad to go there, and there is an abundance of labor, and no trouble about housing. I would like to inquire whether your experience bears that out or not?

Mr. HURLEY. That is our experience. We have no trouble at Jacksonville and Brunswick. They generally start a yard or two yards, and they are fairly good sized, and they do not expand so rapidly that they affect the housing, but where you throw a half dozen yards in one locality it affects the housing problem materially.

Senator JONES. Mr. Hurley, right in connection with the questions of Senator Nelson and Senator Johnson: Aside from the facts with reference to the housing problem, do you think that the system provided by the legislation of Congress is the most efficient system for getting ships?

Mr. HURLEY. You mean of an organization like we have and are working under now?

Senator JONES. Yes.

Mr. HURLEY. That is the only way we can do it.

Senator JONES. So that you do not see any need of any additional legislation by Congress?

Mr. HURLEY. Well, it is a builders' proposition.

Senator JONES. That is what I want to get at—to get ships as quickly as possible. You think there is ample concentration of power and authority to bring about the best results?

Mr. HURLEY. Yes, sir; and if the head of the corporation does not build them, after the experience he has had, it is because of inefficiency.

Senator JONES. And not because of any lack of authority under the law?

Mr. HURLEY. Not now.

Senator HARDING. You think, Mr. Hurley, now that the head of the Emergency Fleet Corporation and the general manager are in accord?

(No response.)

Senator HARDING. I think that is important, in view of the testimony.

Mr. HURLEY. You say, "in power?"

Senator HARDING. You think you are in perfect accord now?

Mr. HURLEY. Oh, yes.

Senator HARDING. Let me ask you another question. The finances at the disposal of the corporation are in your hands and not subject to the dictation or whims of the Shipping Board?

Mr. HURLEY. Yes, sir.

Senator HARDING. You have the authority now to go ahead, and if you do not go ahead it is your fault?

Mr. HURLEY. Yes, sir; absolutely.

Senator HARDING. Are you having any trouble of getting materials furnished?

Mr. HURLEY. Yes.

Senator HARDING. In the steel line, for example?

Mr. HURLEY. Steel plates, you mean?

Senator HARDING. Yes?

Mr. HURLEY. We are improving every day on the steel plates, and the steel plates we ordered two or three months ago are beginning to arrive, and that is helping us.

Senator HARDING. You are planning a very large program for these vessels being provided for?

Mr. HURLEY. You mean winches, engines, and boilers?

Senator HARDING. Yes; various things.

Mr. HURLEY. You see the Navy uses a very large horsepower on destroyers. That affects our program somewhat, but the General Electric and Allis Chalmers and the Westinghouse and all these large concerns building turbines are expanding and are supplying the needs of the Navy and the Fleet Corporation. We are working at a reciprocating engine for equipping additional ships, so we will not get crowded on the turbines. We are watching that pretty closely, Senator.

The CHAIRMAN. You will be able to get machinery, engines, and all that sort of things to fit out the ships as fast as built?

Mr. HURLEY. The turbines are the only thing we are really crowded on. The other engines and boilers there is no trouble about. They are starting a big plant at Erie, Pa.—that is, the General Eelectric—for the purpose of helping the Navy out. If it were not for the needs of the Navy in the matter of turbines, we would have a free hand, but they are being taxed to their capacity. We happen to be using the same type of an engine they are using, but we are following them up and watching it very closely, and the question of longer hours in the engine works is just as important as in the shipyards.

The CHAIRMAN. Do you happen to know now, Mr. Hurley, about the cost of steel ships, say, in June, 1914, in this country and in England?

Mr. HURLEY. I am guessing, but I would say about—before the war?

The CHAIRMAN. Yes; in 1914?

Mr. HURLEY. $50 in England or $40 in England and $60 here.

The CHAIRMAN. $40 in England and $60 here?

Mr. HURLEY. Yes.

The CHAIRMAN. Do you think the conditions here are such as to warrant this increase to $166 a ton?

Mr. HURLEY. If we did not have the Emergency Fleet Corporation in charge, there would not be a shipbuilding yard in the country that could not sell its output at $340 a ton. They sold a great deal at $300 before we were organized.

The CHAIRMAN. Taking into consideration the element of wages and the element of materials, those two things which principally enter into the construction of a ship, has the price of wages gone up so in this country and the cost of materials increased so as to justify that enormous increase of over $100 a ton on steel ships?

Mr. HURLEY. Of course, Senator, they base the cost per ship on freight rates, and the freight rate is any rate that you want to make; and the demand for ships, on the part of men who want to engage in the transportation business forces the prices up.

Senator NELSON. The enormous freight rates?

Mr. HURLEY. Yes.

Senator NELSON. That has done more than anything else to cause that condition.

Mr. HURLEY. Freight, labor, and materials.

The CHAIRMAN. What I was getting at was not so much the question of the value of the ships after produced, but the elements that enter into the cost of production and the thought in my mind is whether or not the Government itself, without making any contracts, could not have gone in and built the yards and built the ships at less than it is now costing?

Mr. HURLEY. The Navy tried that. The Navy had to go into the private yards and get their capacity, and they had a number of shipyards they could have built under, but it was impossible. You could not build them; you had to take advantage of the initiative on the part of the individual throughout the country, and the different sections of the country to produce the maximum amount of tonnage that is now being produced.

Senator NELSON. And I believe they did not get them built cheaper in the Government yards than in private yards, did they?

Mr. HURLEY. I do not know about the comparison with respect to the Navy.

Senator HARDING. You are touching on a long-standing controversy in Congress.

The CHAIRMAN. Of course, the Government might have controlled that factor to some extent where an individual could not.

Senator HARDING. Mr. Hurley, apropos of this little serious discussion, how much has the anxiety over money making had to do with delaying shipbuilding progress in private yards.

Mr. HURLEY. We have found the shipbuilders, the large majority of them, very reasonable and very fair.

Senator HARDING. Is it or is it not a fact that a good deal of work has been delayed in its inauguration due to the one fact that there was a controversy over the profits in the business between the Emergency Fleet Corporation and the private builders?

Mr. HURLEY. That we tried to keep their profits down, and that delayed the matter?

Senator HARDING. That is one angle of it, if you please?

Mr. HURLEY. On these big contracts and on the individual contracts, by the time the excess profits were taken out of their earnings, they would probably have 1 or 2 per cent, or 3 per cent. I think the question of profits is pretty well taken care of. No matter what you may figure they should have, if they make any large profit it is gone. We have not lost much time on that. It has been over the starting of the new yards and satisfying ourselves that these men were the right sort, that they had the proper punch, and that they would go clear through.

Senator HARDING. You did not quite get me. I am not trying to raise the controversy about profits.

Mr. HURLEY. Maybe I did not.

Senator HARDING. I was trying to ascertain whether or or not it is a fact that the private builders at the time the war broke was very busy on contracts that were highly profitable to him; and then the government stepped in and they would not allow him to build for the private customer, and there immediately arose, as I get it, a controversy between the contractor and the Emergency Fleet Corporation over the policy of a profit, and that, notwithstanding a reasonably patriotic inclination, there was a friction between the ship builders and the Emergency Fleet Corporation over that question, which had a tendency to somewhat stall operations.

Mr. HURLEY. With respect to commandeering ships?

Senator HARDING. I am not speaking of commandeering ships; because you refused to allow them to build for me, for example; you stopped all this private enterprise.

Mr. HURLEY. That did cause some dissension, and it was a very hard matter to settle, and it delayed matters.

Senator HARDING. Has that been essentially eliminated all along the line?

Mr. HURLEY. Yes, generally speaking. There are a few cases still that we are going to adjust to the satisfaction of the ship builders. We are trying to drive a good, fair bargain, but we are not going to

be unreasonable, and we find men more reasonable today than they were at the start. They were very much opposed to our taking over ships at the start, because they had large profits in many cases. A private contractor might be paying $300 a ton, or $375.

Senator HARDING. One must assume that there has been a change of policy in the process, else the private yard, like we speak of at Alexandria and other places, starting at this late day, but not content to venture on this expenditure, and I have been trying to learn if there has been a change of policy in that regard?

Mr. HURLEY. A change of policy in that regard on the part of the Fleet Corporation. Admiral Capps, just before he left, helped to straighten out a number of controversies caused by ships that were being commandeered in the yards. I do not think we have over four or five cases left. I am guessing a little bit at the number. So, with that out of the way, there can not be any more feeling that the Fleet Corporation is not treating them fairly. It naturally would cause some feeling to commandeer a man's ships and stop him from progressing along the lines he had planned, and he resented the Government's coming in and taking over his ships.

Senator SHERMAN. Admiral Capps had the power to originate contracts and then initial them and pass them on to you?

Mr. HURLEY. Yes.

Senator SHERMAN. Do you recall any instance in which you delayed the contract by your lack of approval—do you recall a single instance now?

Mr. HURLEY. None.

The CHAIRMAN. If there are no other questions, we will excuse Mr. Hurley.

Mr. HURLEY. Thank you very much.

Senator JOHNSON. Mr. Hurley, before I depart, I have just received a note from Senator McCumber with this query annexed. He has taken a very deep interest in this subject. May I submit them to you to look over at your convenience? [Handing papers to Mr. Hurley.]

Mr. HURLEY. I shall be very glad to.

Senator JOHNSON. There are notes and his comments.

The CHAIRMAN. The committee will now hear Mr. Donald.

STATEMENT OF HON. JOHN A. DONALD, COMMISSIONER OF THE UNITED STATES SHIPPING BOARD.

The CHAIRMAN. Mr. Donald, you are one of the commissioners of the Shipping Board.

Mr. DONALD. Yes, sir.

The CHAIRMAN. You went in when the board was first appointed?

Mr. DONALD. Yes, sir.

The CHAIRMAN. And you took office at what time?

Mr. DONALD. Took office in the last days of January.

The CHAIRMAN. Of this year?

Mr. DONALD. Yes, sir.

The CHAIRMAN. And had you any experience in shipping, either in construction or operation, or both?

Mr. DONALD. I had a good deal of experience in connection with the operation of ships principally. In a general way I knew a good deal about the construction of ships from having followed the construction of my own ships that I was managing.

The CHAIRMAN. What experience did you have in that line?

Mr. DONALD. In managing the ships?

The CHAIRMAN. Yes.

Mr. DONALD. Well, we had 8 ships. I had about 22 ships pass through my hands from the beginning, in respect of their management, and I think my company, at the time I came over here, had 8 ships under its control.

The CHAIRMAN. You were in that business immediately prior to going on the board?

Mr. DONALD. Yes.

The CHAIRMAN. And your company was then operating eight ships?

Mr. DONALD. Yes.

The CHAIRMAN. What was your position with your company?

Mr. DONALD. I am president of the company.

The CHAIRMAN. Where did those ships operate, Mr. Donald?

Mr. DONALD. Between the West Indies, principally, and New York, carrying bananas and fruit, and the Canadian trade on the lakes and on the rivers, never going across to the other side. They were vessels of moderate size. Some were about 2,200 tons deadweight, which were the largest we had in that company. But in another company I was connected with we had larger ships.

The CHAIRMAN. Does that other company operate their ships across the Atlantic?

Mr. DONALD. No.

The CHAIRMAN. The board as organized by the election of Mr. Denman as chairman, I believe.

Mr. DONALD. Yes; that is true. That was in the beginning of February, so far as I recollect.

The CHAIRMAN. What was done, Mr. Donald, then, looking to the carrying out of the purposes of the act? You might give the committee the various steps that were taken.

Mr. DONALD. Well, we got together; five commissioners. I think Mr. Stevens joined us later. I think on the 6th of February, at the recommendation of the board, the President issued an Executive order that no vessels should be transferred from the American flag to any foreign flag, and then after that we were engaged with questions which were coming before Congress, helping legislation, when the war broke out on the 6th of April.

The CHAIRMAN. Had you been looking to preparing for the building of ships?

Mr. DONALD. For the building of ships?

The CHAIRMAN. Yes.

Mr. DONALD. We were entertaining offers from owners who came here to make us proposals for building ships, but only to the extent of the facilities or the money that we had at our disposal, which, of course, as you know, was $50,000,000.

Senator NELSON. When was the Emergency Fleet Corporation created or organized?

Mr. DONALD. So far as I know, about the 1st of April.

Senator NELSON. What contracts, if any, for shipbuilding were let by that corporation during the time that Gen. Goethals and Mr. Denman were in office?

Mr. DONALD. I think, Senator, that that has been clearly stated by Mr. Hurley when he was on the stand here, to the extent of one in April, and the following——

Senator NELSON. How?

Mr. DONALD. You have the number following in May, June, and July. You have the record here.

The CHAIRMAN. Is there any reason why the Emergency Fleet Corporation was not organized before that time?

Mr. DONALD. I can not tell you any particular reason why that should be so, but I suppose that the question of the war having happened and hurried up matters, made it more important that ships should be built right away. I think it accelerated matters so far as shipbuilding is concerned.

The CHAIRMAN. The question was, why was not the Emergency Fleet Corporation organized before it actually was organized and began business?

Mr. DONALD. I think there was some trouble in finding a general manager at the time to take charge of the whole program; some little delay.

The CHAIRMAN. It was organized on the 16th of April, 1917.

Mr. DONALD. Yes.

Senator NELSON. Was there a conflict between the manager of the corporation and the chairman of the board as to the contracts and the kind of vessels?

Mr. DONALD. I can not say, Senator, that I am very well posted about that, because these personal matters were between Mr. Denman and the General.

Senator NELSON. I did not ask for the nature of the conflict, but was there any?

Mr. DONALD. Yes; there was.

Senator NELSON. Did that have a tendency to delay things?

Mr. DONALD. In coming——

Senator NELSON. To delay ships built or contracts?

Mr. DONALD. I do not think so, because Gen. Goethals went ahead on his own account and took matters into his own hands under the ample powers which were given him as general manager of the corporation.

The CHAIRMAN. Was there any effort made to acquire ships prior to that time?

Mr. DONALD. Yes; there were several efforts, several meetings of the board. Of course, before the Emergency Fleet Corporation, there were several meetings at which these matters were discussed, obtaining the help of people to build ships, but then we immediately got into the larger program.

Senator NELSON. Mr. Donald, come out and tell the committee plainly whether or not a controversy in respect to the matter of building wooden ships as against steel ships?

Mr. DONALD. I think that Mr. Denman was very much in favor of building as many wooden ships as possible. I think there is not the

slightest doubt about that. I think when Gen. Goethals came and measured up conditions in the board, he arrived at the conclusion that the steel ship, if it could be produced, was the proper type of ship to go in for, and I thoroughly agreed with him.

Senator NELSON. Did that difference of opinion that you have described delay matters any in letting contracts?

Mr. DONALD. I think it delayed matters so far as steel ships were concerned, but I do not think it did so far as wooden ships were concerned.

Senator NELSON. It caused delay to the steel ships, but not as to wooden ships?

Mr. DONALD. Yes, sir.

The CHAIRMAN. What particular work has engrossed your attention, Mr. Donald, if there has been any assignment of the work?

Mr. DONALD. Principally my efforts have been with the Shipping Board and the Fleet Corporation in its minor activities. I have been connected a great deal with the German ships, fitting them out. At the time that the war broke out I was sent to New York and told to get those vessels repaired with the quickest possible speed and get them ready for sea; they were very much wanted by the allies. It was the intention of the Administration to put those ships in the service of the allies. I went to New York, had the ships repaired, and I think they are all running now, earning money for the owners, helping the allies, or helping ourselves.

Do you want me to go into the question of these other activities of the Shipping Board?

The CHAIRMAN. You might mention the other activities of the Shipping Board. I do not know that it is necessary to go into details.

Senator JOHNSON. Before passing to that, may I just inquire a bit further in relation to the matter just brought out by the Senator from Minnesota? You said Mr. Denman favored the construction of wooden ships and that Gen. Goethals favored the construction of steel ships and in the latter view you concurred. Was it Mr. Denman's idea to construct both wooden and steel ships?

Mr. DONALD. That is true.

Senator JOHNSON. He wanted to construct both wooden and steel ships.

Mr. DONALD. Yes, sir.

Senator JOHNSON. Is not that the policy now pursued by the Shipping Board?

Mr. DONALD. Yes, sir. Of those German ships I think we had about 85 or 90 all together, scattered over the country—at New York, Boston, the southern ports, San Francisco, Seattle, and Puget Sound; and then they were also in Honolulu, Samoa, and Manila. These vessels were in a dangerous condition. Mr. Chairman, I do not know whether I should tell you about that, because perhaps you know that.

Mr. CHAIRMAN. I think you might perhaps give us in a general way the extent of the damage.

Mr. DONALD. We had a board of survey in New York who estimated the damage and submitted an estimate, which was brought here and an appropriation asked for out of the National Security and Defense fund. The contracts were made on the basis of time, material used, machine tools that were used, and the labor, because it was almost impossible to estimate correctly on any of these jobs at

that time. I have figures before me giving a recapitulation of the amount that has been spent, which come to $4,561,000.

Senator NELSON. In repairing those ships?

Mr. DONALD. Yes, sir.

The CHAIRMAN. What was the nature of the damage to them, Mr. Donald?

Mr. DONALD. The nature of the damage principally was to the casting at the side of the high-pressure valve chest, which is attached to the cylinder, and they broke holes in that all around and then took a sledge hammer and smashed this off. Of course, it was a very important part of the connection from one cylinder to the other, and our committee got castings of bronze metal and fixed it. I think the intention of the Germans was that possibly it would require new castings for cylinders, which would have been very difficult thing to have got, but, as a matter of fact, we repaired it with our own castings, and by putting in a patch there that has stood, so far as I know, up to the present time.

The CHAIRMAN. Are you speaking of one ship or all?

Mr. DONALD. They were all damaged in almost the same manner.

Senator NELSON. You repaired them by the electric method?

Mr. DONALD. We helped with the electric welding.

Senator NELSON. You got expert railroad men to help you in the work, did you not?

Mr. DONALD. There was a Mr. Wilson in New York who did help us there. Of course, electric welding is a well-known repair nowadays to ships.

Then we started, after that, a movement to get officers for those ships, knowing that this matter was coming; and our recruiting officer, Mr. Howard, of Boston, has established schools all over the country. I had a good deal to do with that at that time, and we are turning out officers for those ships, because when this tremendous number of ships, 900 or 1,000, are coming forward, it must be necessary to provide men and officers for them. That matter was started in April, and I think that Mr. Howard has produced something like 3,000 men in his schools up to the present time.

Senator NELSON. Has there been much difficulty in getting men to man the ships?

Mr. DONALD. No; there has not. We are not at the present time having any difficulty. There will be difficulty in getting men in the future, and we are taking steps to get that done also; I mean, for sailors, firemen, cooks, stewards, water tenders, and coal passers.

Senator NELSON. Have we had any instances where ships originally built for the Cunard Co. were commandeered, and the Cunard people had crews on hand to man the ships, and the trip through the canal was delayed by our inability to furnish crews?

Mr. DONALD. I think, Senator, that come up in this way: The Cunard Co. expected to get the delivery of these ships and had brought their crews over from Liverpool and put them on board the vessels. I know there was some difficulty, but eventually we took them and manned them.

Senator NELSON. As I understand you, Mr. Donald, our shipping has not been hampered or delayed in its operation for the lack of men.

Mr. DONALD. No, sir; it has not; sir.

Senator NELSON. Has it been delayed or hampered by the lack of bunker coal?

Mr. DONALD. Yes, and bunker coal at the present time is very, very difficult to get in New York. Mr. Carey, our director of operations, tells me he is having great amount of trouble getting coal, and ships are being delayed for coal both at Norfolk and New York.

The CHAIRMAN. Is that situation being removed at all, or is it continuing?

Mr. DONALD. I can not tell you about that; it has not come up before the board, but Mr. Carey, if he appears before you, Senator, can tell you.

The CHAIRMAN. Are you still going on with these schools?

Mr. DONALD. Yes; we are still going on with them.

The CHAIRMAN. Are they intended to equip officers, or to train seamen?

Mr. DONALD. To train seamen as well. The board has made an appropriation to Mr. Howard, of an amount for training officers and seamen.

Senator NELSON. Engineers?

Mr. DONALD. No; the seamen and the firemen; and he has hired a ship in Boston to lodge those men on board, and his idea is to give them about a month and a half training and produce, he thinks, about 2,000 men in a month.

Senator NELSON. Sailors?

Mr. DONALD. Yes.

Senator HARDING. Has there been any consideration of the proposition to man our merchant ships with naval crews or naval commanders?

Mr. DONALD. There has been a proposition, sir, considered at several meetings between the Navy officials and ourselves, and we have reached the conclusion that we want the Navy to run all the ships to the other side that are carrying our troops, and that all the ships carrying munitions and supplies for the armies can also be manned by Naval Reserve crews; but that all other vessels going to the war zone, such as commercial ships, which we have commandeered, and the German ships, which we now own, shall be manned with men already in the service.

Senator HARDING. Have there been losses of merchantmen through the failure of their commanders to conform to the directions of the American Shipping Board or the British Admiralty?

Mr. DONALD. Will you please repeat the question again?

Senator HARDING. Have there been losses of merchant vessels through the failure of their masters to conform to the orders of the shipping authorities in London or the United States?

Mr. DONALD. I have not heard of any. I am the chairman of the ship protecting committee, and I think if there are any difficulties of that kind it would have come to my notice.

Senator HARDING. You know of none?

Mr. DONALD. I know of none.

Senator HARDING. Do you know anything, Mr. Donald, of the delay in the issuing of the commandeering order to cease building in American yards for foreign owners?

Mr. DONALD. I can not tell you regarding that. Matters at that time were difficult between Mr. Denman and Gen. Goethals, because,

as I understand it, that order came out about the 11th of July, and I can not tell you much about that, except that these difficulties were there, and I think that that was the cause of it. I am not very clear on that.

Senator HARDING. Do you know whether we lost any available tonnage for American service by that delay?

Mr. DONALD. Well, I did hear of some being lost, but as it was not in my immediate department, and I was busy otherwise, I did not take a great deal of interest in it, and I am afraid I can not give you very much information as to the exact number.

Senator HARDING. Are we hampering our marine service, coastwise and over the Lakes, by the withdrawal of vessels in that service for the trans-Atlantic trade?

Mr. DONALD. There is not the slightest doubt that our over-seas trade will be very much hampered by reason of the vessels lost in the war zone.

Senator HARDING. The next question, if it is not too embarrassing, was there a controversy in the Shipping Board over organization from the very beginning?

Mr. DONALD. I do not quite understand, Senator, what you mean by that. Over getting together?

Senator HARDING. Let me see. May be I can refresh your mind. Was not Mr. Baker, of Baltimore, originally on the board?

Mr. DONALD. Oh, yes; of course. Mr. Baker was expected to have gone on the board, but he resigned practically before appointed, I think.

Senator HARDING. Was that due to a controversy over the organization?

Mr. DONALD. Over the organization?

Senator HARDING. Yes.

Mr. DONALD. I think it had something to do with that, yes.

Senator HARDING. You know none of the details of that?

Mr. DONALD. Well, I think that—do you want me to state——

Senator HARDING. We are trying to get now, Mr. Donald, what has been the matter with the Shipping Board. If it is not pertinent, I do not want to embarrass somebody personally about it.

Mr. DONALD. Well, I think Mr. Baker expected to have been elected president——

Senator NELSON. Chairman?

Mr. DONALD. Chairman of the board, yes. I think he wanted to be chairman of the board.

Senator HARDING. Was there any interference from the outside in the organization of the board?

Mr. DONALD. I do not think so; I never heard of any.

Senator JONES. Were any members of the board opposed to Mr. Baker being chairman?

Mr. DONALD. I do not think so.

Senator JONES. You do not think so?

Mr. DONALD. No. I would say possibly Mr. Brent or Mr. Denman wanted to be chairman.

Senator HARDING. Mr. Donald, other than the chairman of the Shipping Board, do any members of the board have to do with the Emergency Fleet Corporation, with its policy or its activities?

Mr. DONALD. No, sir. No, I think I can answer that to say that the members of the Shipping Board are all trustees of the Emergency Fleet, and I think that up to the present the general manager has been the only other trustee. Capt. Bertholf, of the Coast Guard Service, served with us, and Mr. Piez has taken his place. We are in thorough accord in the Emergency Fleet Corporation, and we are working well together, nor is there any friction of any kind at all in the Emergency Fleet Corporation at the present time.

Senator HARDING. Was it your understanding that Admiral Capps retired solely on account of failing health?

Mr. DONALD. I understand that is so. I think that Admiral Capps possibly thought that his duties should be of a more important character and that he should have more independence in the direction of the affairs of the corporation as was expressed in the by-laws, but the trustees changed the by-laws to make it in accordance with the by-laws of any ordinary corporation, and these corporation rules have been adopted by us.

Senator NELSON. That is, after he resigned you made those changes, or was it before?

Mr. DONALD. No, it was 15 days before.

Senator NELSON. Mr. Donald, do you not know, as a mater of fact, that Admiral Capps resigned not altogether on account of poor health, but because he was somewhat handicapped by those above him?

Mr. DONALD. Well, I have just stated that I think one reason was that he wanted more independence of action on his own account. I have just stated that.

Senator NELSON. He felt he was hampered in some way by other authorities connected with the fleet corporation or with the board, was not that it?

Mr. DONALD. Well, I think he felt that possibly he would like to have more independence of action rather than be under the immediate direction of the trustees.

Senator NELSON. In other words, that his activities as he conceived them, were hampered by the trustees? Is not that it?

Mr. DONALD. I can not tell you that.

Senator NELSON. You are noncommittal on that point. Mr. Donald, do you think that this ship-building program of the government that we intended to inaugurate by that law through that board, of which you are a member, has been expedited as rapidly as it ought to have been from first to last?

Mr. DONALD. I do, with the exception of the interregnum between Mr. Hurley coming in and Mr. Denman. I do consider that there has been great expedition shown, and there is particularly good management shown at the present time.

Senator NELSON. Since Mr. Hurley came in?

Mr. DONALD. Since Mr. Hurley came in.

Senator NELSON. How was it before that time? Did things move as expeditiously as they ought to have moved before that time?

Mr. DONALD. I think that they did, because you made your appropriation, I believe, on the 11th of July, and there was very little time between that and the time Mr. Hurley came in to take charge. There was a delay during that time because the money was not appropriated and placed at our disposal.

Senator NELSON. Of course, you could have looked the ground over and opened negotiations?

Mr. DONALD. I think Gen. Goethals found the yards of the country pretty well filled up everywhere. He has been busy in trying to get organizations of shipbuilders together. That was the principal thing, since it began, just to use your expression.

Senator NELSON. Were you embarrassed by any action of any shipbuilders of the country?

Mr. DONALD. I do not think so; I never saw any.

The CHAIRMAN. Could you not have decided on designs so you would not have had to make changes afterwards?

Mr. DONALD. Mr. Ferris was brought into the Emergency Fleet Corporation, so far as I know, somewhere in the month of March—let us see, it must have been April or May—and he immediately got up a design of a ship, which I understand has been, to some extent, altered.

Senator NELSON. Was that a wooden ship?

Mr. DONALD. A wooden ship; but at the same time, I think, Mr. Ferris was also designing steel ships. We had a committee, I think, an advisory committee of shipbuilders, including Mr. Homer L. Ferguson, of Newport News, and Mr. P. A. S. Franklin, and one or two other gentlemen, on an advisory committee to devise the best type of steel ship when the money was forthcoming to build them.

The CHAIRMAN. Were they at work on that before the appropriation of the money?

Mr. DONALD. Yes, sir; they were.

The CHAIRMAN. Did they reach the same conclusion?

Mr. DONALD. They did reach it. I understand they took the matter up with Gen. Goethals and I think he adopted, to some extent, their recommendations.

The CHAIRMAN. And that became the Ferris design?

Mr. DONALD. Well, that is the Ferris design—I am talking about steel ships now. This is one for steel ships that this advisory committee acted on.

The CHAIRMAN. What they call "fabricated" ships?

Mr. DONALD. Yes.

Senator NELSON. Is it not a fact, Mr. Donald, that your board and your corporation has not succeeded in increasing our merchant marine except by these commandeered ships that you took from the English and the Norwegians? Is not that a fact?

Mr. DONALD. Well, Senator, it takes time to build ships——

Senator NELSON. I understand that, but I think my question calls for a little different answer than that.

Mr. DONALD. Would you please repeat your question?

Senator NELSON. I say, as a matter of fact, you have not succeeded in—your board and your corporation have not succeeded in increasing our merchant shipping during your administration, except by these commandeered ships that you have taken over from English and Norwegian shipowners? Is not that a fact?

Mr. DONALD. We are getting delivery on some ships. The Emergency Fleet Corporation has one ship particularly in view in Seattle that will be ready to sail the 29th of December. She has her cargo. She has been manned. She has been built. Her contract was signed

in June. Two of the ships when we commandeered them had their frames up on the 3rd of August, when our commandeer order went out, and these two vessels, built on the Pacific coast, have sailed from Pacific ports to Atlantic ports, and their frames were only up on the 3rd of August. I think that is pretty quick work.

Senator NELSON. But they were commandeered ships?

Mr. DONALD. Commandeered ships, yes.

Senator NELSON. Partially built before you took them?

Mr. DONALD. Yes.

Senator NELSON. As I understand Mr. Hurley, as a matter of fact you have only completed one ship outside of the commandeered ships?

Mr. DONALD. I think that is correct.

Senator NELSON. That is correct, isn't it?

Mr. DONALD. I think so, yes.

Senator JOHNSON. Mr. Donald, you were asked whether or not there had been a contest originally over the selection of a chairman of the board. Did that contest interfere at all with your organization of the board and then with the performance of your work thereafter?

Mr. DONALD. None whatever, sir.

Senator JOHNSON. And from the time of the organization of your board up to the time of Mr. Denman's resignation were you constantly, continuously at work upon your program?

Mr. DONALD. Yes, sir; we were.

Senator JOHNSON. And was it diligently pursued during that period?

Mr. DONALD. I think it was, yes.

Senator JOHNSON. And with such despatch as was possible under the circumstances?

Mr. DONALD. Yes.

Senator JOHNSON. I understood you subsequently to say as well that there had been no friction whatever in the board since Mr. Hurley had come upon it?

Mr. DONALD. I think that is right.

Senator JOHNSON. Is that correct?

Mr. DONALD. I think so.

Senator JOHNSON. Has there been any friction of any sort since the advent of Mr. Hurley that has in any degree interfered with the carrying on of your program or the execution of your designs?

Mr. DONALD. I do not know of any, sir.

Senator JOHNSON. Before Mr. Hurley came matters moved expeditiously, did they not?

Mr. DONALD. I think so, up to the point we got appropriations from your committee.

Senator JOHNSON. Yes, sir. And there was a very brief interregnum between the time of the resignation of Mr. Denman and the advent of Mr. Hurley, to which you have adverted?

Mr. DONALD. I think only one day. Mr. Hurley was elected the same day Mr. Denman resigned and Gen. Goethals resigned. And Admiral Capps was put in the same day.

Senator JOHNSON. Now, specifically, I ask you again, has there been any friction upon the board at any time from the time of your

organization that has interfered with the orderly process of the work or the execution of your shipping program?

Mr. DONALD. I do not know of any, sir.

The CHAIRMAN. Do you know of any way, Mr. Donald, that delays might be avoided in the way of letting contracts, going on with the work, and that sort of thing?

Mr. DONALD. Well, I can not say I do. It is the duty of our employees in the office to give due expedition to any man who has a contract. I have not heard of any. There have been one or two complaints, but I have referred them to that department downstairs, the Emergency Fleet Corporation. But there has never been anything very serious.

The CHAIRMAN. So far as you can say, the machinery is not cumbersome?

Mr. DONALD. I do not believe it is.

Senator HARDING. Has there at any time, Mr. Donald, been any hesitancy or uncertainty on the part of the Emergency Fleet Corporation as to policy?

Mr. DONALD. No; I do not think there has been any hesitancy. We have made up our minds—the whole idea at our meetings has been the speeding up of ships. Everybody has had that idea in their heads: "How can it best be accomplished?" And the chairman had Mr. Piez brought in for the purpose of expediting that matter. There was a committee appointed by the chairman to look into that matter, and they came back and made a report to us that there were conditions in the yards that were keeping things back, and the idea was to get a business manager like Mr. Piez to shove things forward, and Mr. Piez has been doing that.

The CHAIRMAN. Is there competition in the bidding for this work, or do you fix prices?

Mr. DONALD. That matter is dealt with entirely by the Emergency Fleet Corporation. I can not say that I am particularly posted as to the method, but Admiral Bowles can tell you that—and the other members. Admiral Bowles is here.

The CHAIRMAN. What I had in mind is this: It seems that these steel ships, for instance, are costing $166 a ton. I presume that is an average, and it is about the same; each bidder is doing the work at about that figure. How does it happen that they are all bidding practically the same thing for the same work?

Mr. DONALD. Well, I think the prices of material are so regulated, and overhead costs, etc., and labor is pretty much the same thing that you get nearly the same result in price. I have observed, too—I have been astonished in reading over the contract lists to see the regularity of prices, ranging from $140 to $160.

The CHAIRMAN. Do you know whether the work at Bristol by the Merchants Shipping Co. is to be stopped?

Mr. DONALD. Do I know whether it is to be stopped?

The CHAIRMAN. Yes.

Mr. DONALD. I have not heard so, sir.

The CHAIRMAN. Some one writes me a letter asking to inquire why it is that the work at Bristol is to be stopped and abandoned Saturday next.

Mr. DONALD. If Mr. Stevens were here, he might give you a lot of information about the labor conditions in all those yards, because he

has been visiting them with great regularity. He has been using great efforts to harmonize matters.

The CHAIRMAN. You do not know of this stopping of the work there?

Mr. DONALD. No: I do not. sir.

Senator NELSON. Mr. Donald, I have heard several good men state that during Gen. Goethal's administration—shortly before he went out of office—there were four ships completed in our yards ready to go to sea, for foreigners: I think two for the Japanese—I am not certain about that—and two for the British; and that Gen. Goethals recommended that those be commandeered by our Government, and no action was taken. They were allowed to go to sea. A great many good men, even Senators, and they are supposed to be good, have made that statement. Do you know anything about it?

Mr. DONALD. Do you mean, Senator, between the time——

Senator NELSON. During the last part of Gen. Goethal's administration.

Mr. DONALD. Yes; that is between the time when we got the power from you and the time we actually gave the order?

Senator NELSON. Yes.

Mr. DONALD. I will be very glad to look it up, sir, but I don't recall.

Senator NELSON. I would be very glad to have you look it up.

Mr. DONALD. I will.

Senator NELSON. I have heard there were four or five ships. In fact, it was not any longer ago than two or three days that that statement was made right in this room.

Mr. DONALD. I know that there were negotiations between the British Government and ourselves as to whether these ships—some vessels were to be held by them or held by us—and it may have been during that period of uncertainty.

Senator NELSON. I have heard that four good ships left our yards, four large ships that we ought to have commandeered.

Senator JONES. Mr. Donald, do you agree with Mr. Hurley that the law is ample now?

Mr. DONALD. Yes, I do. I think we have all the powers we want.

Senator JONES. So that if there is any unnecessary delay it rests within the board or the corporation?

Mr. DONALD. I think so.

Senator JONES. Now, I want to ask you this. We have gone into the matter of Admiral Capps getting out of the office of manager. Why was it that Admiral Harris stayed in so short a time?

Mr. DONALD. I only met Admiral Harris once, and I would prefer that you take the matter up with Mr. Hurley, because he saw him all the time.

Senator JONES. Well, do you know why? Was it because he thought he did not have ample authority or that he was handicapped and hampered?

Mr. DONALD. It was reported to me that he did some things which we thought the trustees ought to have knowledge of before he did them, and we thought it was for the good of the service—we thought it was for the good of the service.

Senator JONES. In other words, he acted in a way that was not satisfactory to the trustees and the board?

Mr. DONALD. That is right.

Senator JONES. Did you think he exceeded his authority or acted unwisely?

Mr. DONALD. We thought he exceeded his authority and, to some extent at that time, acted unwisely.

Senator JONES. In other words, he was not unhampered then? That is, he did not have the authority he thought he had?

Mr. DONALD. That is the idea.

Senator JONES. Now, you think you have the system so that the manager has full authority?

Mr. DONALD. Has full authority. We have delegated to the chairman the authority, and the chairman again has delegated the authority to the vice president and general manager. I am one of the vice presidents myself, but Mr. Piez is looking after this matter here.

Senator JONES. So that the full authority, instead of being centered in the manager, is centered in the President?

Mr. DONALD. Centered—yes, exactly.

Senator JONES. And you do not expect his action to be interfered with by the board whether he acts wisely——

Mr. DONALD. I do not know. We expect the president to submit to us, to the trustees of the board, matters of interest, so that we can pass on the matter, just as any other ordinary board of directors would.

Senator JONES. Does the president have to submit contemplated action to you for your approval?

Mr. DONALD. We expect him to.

Senator JONES. I did not understand that Mr. Hurley took that position a while ago.

The CHAIRMAN. He does actually do that?

Mr. DONALD. He does actually do that, yes; he actually consults with us.

Senator JONES. I know, but if he thinks certain action ought to be taken, wouldn't he take it without conferring with you?

Senator SHIELDS (interposing). What are the by-laws on that subject?

Mr. DONALD. The by-law was that the business of the corporation is in the hands of the trustees. We are like any ordinary corporation. We elect a president among ourselves, and we elected Mr. Hurley. Mr. Hurley is executive for the trustees, like any other trustees. That is my idea.

Senator SHIELDS. What powers has Mr. Hurley under the by-laws?

Mr. DONALD. He has the powers to engage any person that he sees fit to help the affairs of the company; he can engage a general manager or engage any help that is required; and he can sign contracts, and he can dismiss anybody if he so desires—outside of the trustees, I suppose.

Senator NELSON. Were not men like Capps and Harris when they were in subject to his orders? Couldn't he veto anything they set out to do?

Mr. DONALD. Excuse me, Senator; I did not quite understand that question.

Senator NELSON. Take the case of Capps and Harris both. Couldn't Mr. Hurley as chairman of the board or as president of the corporation veto or overrule any action they took?

Mr. DONALD. No; not so long as the by-laws were in the condition they were in before, before the change.

Senator NELSON. But he can now, as you have amended them?

Mr. DONALD. Yes.

Senator NELSON. So he has the absolute power?

Mr. DONALD. Yes.

Senator NELSON. The man then that you put in—what is his name?

Mr. DONALD. Mr. Piez. He is here.

Senator NELSON. He is simply, when you boil it down, a creature—I shouldn't use that expression—simply the agent of the president of the board and the president of the corporation?

Mr. DONALD. Yes.

Senator NELSON. That is, the power is not in him but in the president of the corporation?

Mr. DONALD. He delegates his powers, Senator; he delegates his powers.

Senator NELSON. But that delegation he can at any time revoke, can he not?

Mr. DONALD. He can; yes.

Senator NELSON. It is all in his conscience and in his mind?

Senator HARDING. Now, Senator, I think we are getting down to the point of conflict here. In the earlier by-laws of the corporation the general manager was an authority within himself?

Mr. DONALD. Yes, sir.

Senator HARDING. And Gen. Goethals was acting under that authority?

Mr. DONALD. Yes, sir.

Senator HARDING. Was it the impression of the Shipping Board that he came there with explicit orders to do certain things?

Mr. DONALD. I can not tell you about that, Senator.

Senator HARDING. But because of the exceeding authority given to the general manager, conflicts arose?

Mr. DONALD. I wouldn't say that. There might be something of a temperamental difference which might interfere just as much.

Senator HARDING. I am inclined to agree with the wisdom of the board. I think there has been too much authority. Somebody ought to have authority and be held responsible, and I rather like your improved arrangement myself. But I would like to know more about the inside of the previous conflicts.

The CHAIRMAN. I think if the committee wants to go into that question of Admiral Harris, Mr. Hurley perhaps is the best man to deal with it, because he had to do with it directly, and perhaps that letter from Mr. Hurley to Admiral Harris explains the whole difference.

Senator NELSON. We can get information on this point while examining the men that are directly interested—Gen. Goethals and Admiral Capps and Admiral Harris. They ought to know.

Senator HARDING. I venture that Mr. Hurley would know something about that if you wanted to go into it.

One other question I wanted to ask, Mr. Donald, which takes us into quite another line. What is being done to provide for the

coastwise and lake commerce that is being more or less impaired by the withdrawal of ships? To be more specific, you are taking a number of ships out of the lake trade which are very essential to that trade. Some of them are cut in two, are they not, and then go through the canal?

Mr. DONALD. Yes, sir. I think there have been 16 ships taken out of the Lakes which have been over the canal size. They have been about 320 long as a rule; you know, they have got to be cut. Then in addition to that, we have got five more of canal size which we have taken. The idea is to lease tonnage which is in the New England trade carrying coal, large ocean-going ships of splendid construction, fit for going across. We want that tonnage, and want to take those lake vessels, which are being reconstructed now in salt water, and gradually get into the New England coal trade, which, of course, is absolutely necessary to keep our munition trade and all our other trade going in connection with the war.

Senator HARDING. Is there any private construction permitted or encouraged that will replace the carrying capacity removed from the Lakes?

Mr. DONALD. That is a matter I would prefer you to ask Mr. Hurley and Mr. Piez about.

Senator JONES. Right in connection with that, we passed a law last session permitting foreign ships to come in, in the hope they would take the place of these ships. Have any foreign ships come in?

Mr. DONALD. No. Not many, Senator.

Senator JONES. Have any gone to the Great Lakes? Have any foreign ships gone into the coastwise trade and the Great Lakes?

Mr. DONALD. As a rule, you see, it is a very small ship that goes into the lakes.

Senator JONES. I understand; but it was contended there were Canadian ships up there that would go into that coastwise trade.

Mr. DONALD. It is true. We have four ships called the Key boats up in Montreal—the Keystone Transportation Co. We have four of their boats coming down at the present time which are going to engage in that trade.

The CHAIRMAN. That act was passed October 6, 1917.

Senator JONES. Mr. Chairman, I would like to ask if these old by-laws have gone into the record?

The CHAIRMAN. Yes; they have.

Senator SHIELDS. Have you put the old by-laws and the new by-laws both in the record, or just the last ones?

The CHAIRMAN. I understand, the whole thing.

Mr. DONALD. Just the amended ones.

Senator SHIELDS. It would be better to file a copy of the original.

The CHAIRMAN. Better offer the original, and then the changes that have been made.

(The by-laws referred to will be found printed in full on page — of this volume.)

Senator NELSON. Has not the Government, as a matter of fact, secured a good deal of neutral shipping in our commerce here—in our shipping to South and Central America?

Mr. DONALD. Yes.

Senator NELSON. In order to relieve our shipping for overseas transportation?

Mr. DONALD. The efforts of the board are being exerted in that direction just now, and negotiations are going on with the representatives of at least four governments that we can get some of their tonnage in exchange for our commodities.

Senator NELSON. Yes; to relieve our tonnage for war purposes?

Mr. DONALD. That is the idea; yes, sir. We have been working with that idea.

The CHAIRMAN. The committee will now adjourn.

(Thereupon, at 5.25 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. to-morrow, Saturday, December 22, 1917.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

SATURDAY, DECEMBER 22, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., in the committee room, Capitol, Senator Duncan U. Fletcher, presiding.

Present: Senators Fletcher (chairman), Nelson, Jones, Sherman, Harding, and Johnson.

Present also: Hon. J. W. Alexander, chairman of the Committee on Merchant Marine and Fisheries, House of Representatives.

The CHAIRMAN. We closed with Mr. Donald yesterday. Are there any further questions to ask Mr. Donald?

Senator NELSON. Yes; I would like to ask one or two questions. I want to say to you, Mr. Donald, it is not for the purpose of going over that old controversy, but there was friction between Mr. Denham and Gen. Goethals while they were both on the board and corporation, was there not—disagreement?

STATEMENT OF HON. JOHN A. DONALD, COMMISSIONER OF THE UNITED STATES SHIPPING BOARD—Resumed.

Mr. DONALD. Yes, sir; I took that impression, sir.

Senator NELSON. I am not asking you what that was, but did not that disagreement tend to delay the program of shipbuilding? Didn't it work to delay that program?

Mr. DONALD. I can not quite see that it did, for this reason: We were preparing to build ships at the time that controversy was going on, and the authority and the appropriation for the money did not come forward until July, when this controversy pretty nearly came to a head. I think that, Senator, is about the situation.

Senator NELSON. Were there any contracts entered into while that friction was happening?

Mr. DONALD. There were. There were contracts entered into in anticipation of getting the money from yourselves.

Senator NELSON. What were they? For wooden ships or steel ships?

Mr. DONALD. Both wooden and steel.

Senator NELSON. Who were the contracts made with?

Mr. DONALD. I am sorry I can not recall that, Senator.

Senator NELSON. Were they made with people on the Pacific coast or on the Atlantic coast?

Mr. DONALD. I think they were made both on the Atlantic and the Pacific.

Senator NELSON. The chief wooden-ship building is carried on on the Pacific coast, is it not?

Mr. DONALD. And in the South.

Senator NELSON. Yes; and in the South.

Mr. DONALD. In the South and on the Pacific coast; yes, sir.

Senator NELSON. There was considerable shipbuilding; that is, considerable preparation for building wooden ships on the Pacific coast before you started in?

Mr. DONALD. Oh, there is no doubt about that, that the foreign nations came over here, such as Norway and England——

Senator NELSON. Hadn't they prepared several shipyards?

Mr. DONALD. They had prepared several shipyards, and were in course of constructing lots of vessels on the Pacific coast.

Senator NELSON. Yes; before you started in?

Mr. DONALD. Before the war broke out.

Senator NELSON. And they were engaged in that at the time your commission was organized?

Mr. DONALD. I think that is true, sir; yes, sir.

Senator NELSON. Do you know how many shipyards the English and Norwegians had on the Pacific coast?

Mr. DONALD. I can not exactly tell you, but I remember an estimate—without having charged my memory with it, I think it was about 150 or 160 ships.

Senator NELSON. Yes; I mean how many yards?

Mr. DONALD. How many yards?

Senator NELSON. How many shipyards, I mean.

Mr. DONALD. There had always existed shipyards on the Pacific coast.

Senator NELSON. Both Norwegian and English?

Mr. DONALD. No; I say there had always existed shipyards on the coast before the war, but they were very much augmented after the general European war started and before we got into it.

Senator NELSON. Augmented by whom?

Mr. DONALD. Augmented by our own shipbuilders.

Senator NELSON. By themselves, not by the Government?

Mr. DONALD. Yes.

Senator NELSON. And it is these ships principally you have commandeered, is it not?

Mr. DONALD. We have commandeered their ships on the Pacific coast and in all parts of the United States besides.

Senator NELSON. Was there any shipbuilding started for building wooden ships on the Gulf coast when you were organized?

Mr. DONALD. There were very few yards on the Gulf coast before the general European war started, but in the interval between the starting of the war and the breaking out of the war with Germany by ourselves there was a great number of yards started on the Gulf.

Senator NELSON. Do you remember at what places?

Mr. DONALD. I think there was a yard started in New Orleans, and in Sabine, Tex., and at Beaumont, Tex.——

Senator NELSON. Gulfport?

Mr. DONALD. And Gulfport, I think. Yes; Gulfport, too; and Jacksonville, too. We already had a shipbuilding plant there.

The CHAIRMAN. There were two yards already there, or parts of yards, and they started some new ones there?

Mr. DONALD. Yes.

The CHAIRMAN. Before July 11, when you got the order giving you legal power to commandeer ships on the stocks, had the board made any investigation as to what would be necessary for that commandeering—that is, the cost of it and the plans for putting it into effect, anticipating that they would be authorized to do that?

Mr. DONALD. The plans were certainly made by the board for the taking over of that tonnage which was building by the foreign nations prior to that, and we knew they would fall into our hands.

The CHAIRMAN. Mr. Denman states that (reading):

Realizing the necessity for the utmost expedition, both Gen. Goethals and myself, during the period when the power lay with the President, continued to make contracts for many steel and wooden vessels of the ordinary standard types, feeling confident that the President would ultimately place the power where one or the other could procure a ratification.

Mr. DONALD. That is really true, sir.

The CHAIRMAN. You believe that is so?

Mr. DONALD. Yes, sir; in fact, I think we made contracts beyond our allotment of $50,000,000, which was placed at our disposal, anticipating these appropriations to come forward later.

The CHAIRMAN. What do you know regarding this statement (reading):

It should be noted also that during the entire time of Gen. Goethals's employment I have signed, as soon as I have read them, every contract sent to me by him save one. This was signed after four days' delay.

Have you any information about that?

Mr. DONALD. I have not much information about that, because Mr. Denman signed all the contracts, and that was a matter between Gen. Goethals and himself; but I understand that the principle was that the general initialed or signed the contracts and sent them down to Mr. Denman for signature, and he signed them when he saw his initials there.

The CHAIRMAN. Mr. Denman further states (reading):

Having in view the Government's power to commandeer the ore products and scrap and the steel and iron plants, the price may well be lower.

I may as well start further back [reading]:

This was signed after four days' delay, during which time the tentative price of $95.20 a long ton for steel was changed to a tentative price of $56. The lower amount was justified as a tentative figure by a careful expert study of steel prices, based on the steel corporation's figures. Having in view the Government's power to commandeer the ore products and scrap and the steel and pig-iron plants, the price may well be lower. With that $50,000,000 of capital we obligated the Emergency Fleet Corporation, according to Gen. Goethals's summary, for 1,218,000 tons of wooden ships and 642,000 tons of steel ships (standard, not fabricated), at a total cost of about $275,000,000. We had 100 more wooden ships under negotiations, which we would have contracted for even if the delegation of power had been further postponed. It is quite safe to say that no corporate officers in the world have ever so far exceeded their authority. The submarine losses, constantly before me, made this action seem no more than normal.

Is that according to your recollection?

Mr. DONALD. I think that is so.

The CHAIRMAN. So that you were really going on with the work?

Mr. DONALD. I think Gen. Goethals entered into some contracts at a high price for steel tentatively, but the understanding was that if there was a reduction in price given by the steel companies the Government should get the benefit, and I have the price stated at something like 3½ cents a pound, which I think is $50 or $60 a ton, as against the $95 which the contracts were predicated on. But it was always understood the Government would get the benefit of any reduction when those contracts were made by Gen. Goethals.

Senator JOHNSON. Mr. Donald, during the time of the Denman-Goethals régime you were working continuously, preparing, pioneering the way, and, indeed, negotiating contracts, were you not?

Mr. DONALD. We were, sir.

Senator JOHNSON. I observe from the statement that yesterday was made by the chairman that in May there were 76 vessels contracted for, in June 137—and this would answer, perhaps, Senator Nelson, what you were asking—in July 138. The figures of course I assume to be correct.

Mr. DONALD. Yes, sir.

Senator JOHNSON. Now, the commandeering order was made on the 11th day of July, according to the date that has been given to us here. Do you recall that it was on the 24th day of July that the resignations of Gen. Goethals and Mr. Denman were tendered?

Mr. DONALD. I do, sir; yes, sir.

Senator JOHNSON. The time elapsing between the 11th day of July and the 24th day of July—can you specifically recall whether or not any ships in that period were delivered to foreign governments, or were delivered to private individuals?

Mr. DONALD. Senator Nelson asked me to produce those figures yesterday and to look it up, and I have done so, and here is a list of the ships built and that have so gone out from under the flag. So far as we can make out, from the 11th of July to the 3d of August there were two ships, but from June 15 to July 10——

Senator JOHNSON. That is the point.

Mr. DONALD. From June 15 to July 10 there were three ships, and from July 11 to August 3 there were two ships, making five altogether.

Senator JOHNSON. Now, the three ships that were delivered from under the flag, as you put it, between the time that the authority was granted and the time of the exercise of that auhority, July 11, were delivered to whom?

Mr. DONALD. Were delivered—well, I think one, the *Stolt-Nielsen;* but only three from June 15 to July 10, when the Executive order was put in our hands. The *Stolt-Nielsen* is one, to the Norwegian; the *War Tune*, to the British; and the *Astri*—she was a power ship—to the Norwegian. That is from June 15 to July 10.

Senator JONES. What was their tonnage?

Mr. DONALD. The tonnage altogether of the five ships was about 25,000 tons dead-weight.

The CHAIRMAN. Can you give the tonnage of each?

Mr. DONALD. The tonnage of the *Stolt-Nielsen* was 8,594, of the *War Tune* 3,000, and of the *Astri* 2,583.

Senator JOHNSON. Before you had any power to act in the premises it was known that the Executive order was to be promulgated, was it not?

Mr. DONALD. Of course, there is one thing about the Norwegians which I ought to explain. We were not very clear at that time what the status should be of dealing with the Norwegian ships, whether we had the power to keep them under our own flag, and there was an uncertainty at that time whether it could be put into effect, by reason of a treaty with Norway, made in 1827, which I understand is still the subject of research by the State Department.

Senator JOHNSON. But before you could act at all it was necessary that the Executive order be promulgated, was it not?

Mr. DONALD. Yes; that is true.

Senator JOHNSON. Now, the two ships that subsequently went from under the flag after the promulgation of the order went to whom, please?

Mr. DONALD. One to the Norwegian and one to the French—the *Storviken* of 7,000 tons dead weight, and the *Poitiers*, which is French, 3,000 tons. The *Poitiers* came from the Lakes. The *Storviken*, as far as I can recollect, was built out at Seattle, Wash.

Senator JOHNSON. At the time of the resignation of Gen. Goethals and Mr. Denman there were many contracts not yet signed but which had been prepared and were about to be entered into, were there not?

Mr. DONALD. I believe that is so, because Gen. Goethals sent for me the night before he resigned, and he said there were such contracts and they ought to be acted upon at once; and I called a meeting of the trustees on that same night that the general resigned and put the matter before them, and they elected Mr. Hurley and Admiral Capps. So there was no lapse of time.

Senator JOHNSON. Were those contracts entered into with reasonable dispatch by Admiral Capps, subsequently?

Mr. DONALD. I can not tell you about that. I would like if you would speak of all that period after the 27th—Mr. Hurley can give you more information than I can, for the reason that he immediately stepped into Mr. Denman's shoes. I didn't meet Admiral Capps much at that time at all.

Senator JOHNSON. Is it or is it not a fact that there were various differences with the contractors upon contracts that were pending at the time that Admiral Capps assumed control that caused delay?

Mr. DONALD. Well, I can only speak from my own personal experience in these matters, and I think the Admiral—from meeting him casually—told me he had found some contracts that required to be looked into very carefully.

Senator JOHNSON. How long did it take for that careful examination?

Mr. DONALD. I can not tell you, Senator.

Senator JOHNSON. Can you say whether or not a period of a couple of months elapsed with those contracts pending before they were entered into?

Mr. DONALD. I would not undertake to say anything of the kind.

Senator HARDING. You spoke, Mr. Donald, of being connected more with the operation of the fleet than otherwise?

Mr. DONALD. I have, Senator. In case you would like to know my activities, I think I spoke somewhat disjointedly yesterday about the German ships, which I had charge of—getting the ships ready for sea. In that regard, I saw a statement in the paper today—

which I hope is not in the record—in which it was stated none of those ships were ready for sea. I wish to state that these ships, repaired, commenced to be delivered to the allies or the representatives of the Government as early as the 3d and 4th of May after they came into our hands, which was about a month after the war broke out, when we took charge of those ships; and from that date up to the present—from that date right straight along the ships were being delivered to the allies.

Senator HARDING. That is not what I had in mind. Perhaps I have not expressed myself clearly.

Mr. DONALD. You have, Senator; but I just wanted to correct that in a general statement here.

Now, other activities are these: We have taken over from the Army the *Meade*—this was before the war broke out. We have taken over the *Meade*, which was an Army transport, and the *McClellan*, which was a refrigerating ship. We took those ships over from the Army. We took over the *Iris*, the *Boston*, the *Princeton*, and the *Rainbow* from the Navy Department, turning them into cargo ships. The repairs and alterations on the *Iris* and *Boston* are being carried on now. We bought a ship called the *Columbia* for towing across the Pacific these ships which were interned in Honolulu and which were so badly damaged.

The CHAIRMAN. Could you give us the dates, as nearly as you can, of those transactions?

Mr. DONALD. Well, that was all in April. The most of these ships were taken over and delivered by May and June. We found some of them had to be repaired in Honolulu and in the Philippine Islands. We had nine ships in Honolulu which were so found, and we had 23 in the Philippines. So those vessels which were incapacitated had to be towed: the vessels that could be repaired were repaired on the spot.

Senator NELSON. They had to be towed to this country for repair?

Mr. DONALD. Towed to this country; yes, sir; except from the Philippines, because that was too long a tow, but from Honolulu it was about 2,200 miles.

Senator NELSON. Where did you repair the Philippine ships?

Mr. DONALD. The Philippine ships were repaired, some in the Philippines and some in Hongkong.

I want to say that the recruiting officers and engineers—I think I touched on that yesterday and gave you an idea as to that activity. There has been a New York office established to operate the ships there, with a regular organization. I can not say how many there are there, but it has been going on for some time. In fact, it was established away back in April, when the war broke out.

There has been a chartering committee—I think this is in line with what you want.

Senator HARDING. I will ask you as you go along.

Mr. DONALD. There has been a chartering committee formed in New York for the purpose of regulating charters. When an officer has a ship from abroad he has got to submit her charter from our citizens to the foreign owner for the approval of our chartering committee. That is for the purpose of reducing and bringing down to a proper rate these extravagant and altogether ruinous and uneconomic

rates which have prevailed in this country, and charges which were taking our resources, inasmuch as they are paid to those foreign nations, and those foreign nations are paying those extravagant rates.

When I tell you that to Genoa there has been as much as $200 a ton paid, and when I tell you that the freight list of a ship will amount to as much as $1,300,000—a ship of, say, 7,000 or 8,000 tons—you can imagine what a tremendous drain that is on those Governments. The chartering committee is established for the purpose of breaking down those rates—breaking, in the first place, the neutrals' rates down. The neutral ships can not come and take those tremendously speculative rates and run away with them, because they have got to come to us first for their approval. We have a chartering committee in New York, composed of Mr. Welding Ring, Mr. Daniel Bacon, and Mr. J. B. Smull, three men who, I think, are pretty well known there; and I think they have the confidence of the public there; and all charters, no matter where they are, all over the country, have got to come to those gentlemen for approval.

Senator NELSON. Haven't you got the means now of regulating the charter rates indirectly of these foreign ships by means of the embargo rule and the letters of assurance? They can not sail in cargo from our ports without the letter of assurance?

Mr. DONALD. If they do not agree to our rates that we have stated, we say, "You get no coal, and you get no stores here"——

Senator NELSON. And "You get no assurance"?

Mr. DONALD. And "You get no assurance."

Senator NELSON. And "You get no bunker"?

Mr. DONALD. That is it.

Senator NELSON. In that way you control their rates like our own vessels?

Mr. DONALD. Exactly; bring it down to the price of our own ships.

Senator NELSON. Have you chartered, either directly or indirectly, any foreign ships from our service?

Mr. DONALD. We have chartered on the Pacific coast—I think I touched on this matter yesterday—to get their vessels on charter, with the understanding that they shall not be sent into the war zone, but to South America and other places, where they will have no risk.

Senator NELSON. From our ports to South America?

Mr. DONALD. Yes.

Senator NELSON. So as to relieve our ships here at home?

Mr. DONALD. Yes; that is the idea: to allow our ships to go into the war zone.

Senator NELSON. Yes: into the war business?

Mr. DONALD. Let me tell you—continuing this matter—that I have had a letter, and Mr. Carry, director of operations, has a letter from New York, saying that last week they approved 90 charters and they rejected 27. That is going on every week.

Senator NELSON. Were they charters of our own ships?

Mr. DONALD. No—oh, yes: some of them, I think, were charters of our own ships, but most of them were neutral ships, principally Norwegian ships. In addition to that, Mr. Carry is negotiating and is carrying out the charter of a large Norwegian ship of about 10,000 tons, which is a motor ship, now on the Pacific coast. That vessel

we have taken for 12 months' time, chartered at a reasonable price, with the idea of introducing into the Pacific trade motor ships instead of steamships, so that with the development of the oil industry in California we can compete against the Japanese, who are running with coal ships. We think we are going to have an advantage in that way.

Senator NELSON. Those are the Diesel motors?

Mr. DONALD. Diesel motor ships; yes. The idea is that if we get those vessels introduced into the trans-Pacific trade we will have an advantage against the Japanese, who, of course, are running with cheap tonnage and cheap wages. Now, if we can run motor ships, I think we should develop as much as we possibly can along that line, and I have so written to many of my friends on the Pacific coast, telling them I think it is their only salvation.

Senator NELSON. You think those ships, then, have proven themselves to be a success as freight carriers?

Mr. DONALD. Well, they have. As freight carriers they have been a success, but that all depends on the kind of construction they have and who constructs them.

Senator HARDING. Do you think, Mr. Donald, under the seamen's act, we have got a chance against Japanese competition in the Pacific trade?

Mr. DONALD. Well, Senator, that all depends on what we are going to do after the war for our sailors.

Senator HARDING. I mean under existing conditions, as they are to-day.

Mr. DONALD. Well, under existing conditions I need not tell you the Japanese on the Pacific coast are getting the largest share of our business.

The CHAIRMAN. That is, you mean because we have not got the ships?

Mr. DONALD. Because we have not got the ships. We have only got about 12 ships altogether under our flag on the Pacific coast. We have got the Pacific Mail——

Senator HARDING (interposing). You mean now the trans-Pacific trade?

Mr. DONALD. The trans-Pacific trade. I mean the eastern trade, which is going out and developing all the time. The exports which used to come to London and to Hamburg from the east are now, by reason of the difficulties of transportation through the Suez Canal, coming direct to our coast now, and we are doing a direct business with them now, which was not done before.

Senator HARDING. You spoke a moment ago of your director of operations?

Mr. DONALD. I am chairman of the committee on operations, but Mr. Carry is the director.

Senator HARDING. Does he operate from here?

Mr. DONALD. He operates from here.

Senator HARDING. Does he have charge of the embarking and disembarking of cargoes and the preparation of ships, or the superintendence or control of ships in loading?

Mr. DONALD. Well, when a ship is ready, he assigns it to a certain party to load, and the policy has been that people who have already

been owners should have the operation of the board ships on a commission basis; that they will become the agents of the board.

Senator HARDING. Then you do not attempt to interfere with their operations?

Mr. DONALD. Well, these chartered boats which we have taken from the American fleet, we turn back to the owners, and put them on the same trade that they were in before, unless they are going to the other side.

Senator HARDING. I do not think you quite understand me. We have requisitioned all the ships in this country, have we not?

Mr. DONALD. Yes, sir.

Senator HARDING. Now, does your director of operations superintend the handling of those ships in the service?

Mr. DONALD. Well, now, so far as getting crews for them and operating the ships physically is concerned—getting the crews and provisioning them—we do that ourselves out of our New York offices. But when it comes to placing the ships and sending them abroad, he puts them in the hands of parties who he thinks are suitable for moving the ships.

Senator HARDING. What proportion of ships is under the control of the Army—in the Quartermaster service?

Mr. DONALD. That is a very mooted question, Senator Harding, and perhaps we had better not say too much about that here.

Senator HARDING. The thing I want to get at will not be objectionable, I am sure. Who directs the operations of loading and unloading the ships in the service of the Army?

Mr. DONALD. That is done by a representative of the Quartermaster's Department of the Army in New York.

Senator HARDING. Is it the understanding of your board that it is done efficiently?

Mr. DONALD. I prefer not to express any opinion about that, sir.

Senator HARDING. Where can we get that information accurately?

Mr. DONALD. I think if you had Mr. Carry before you, he would probably tell you his views on that.

The CHAIRMAN. What are his initials. Is it Edward F. Carry?

Mr. DONALD. I think so.

Senator HARDING. The point I am trying to bring out is this: It is not my desire to reveal something disagreeable to the board, but there are reported inefficiencies in our service that need correction.

Mr. DONALD. Yes.

Senator HARDING. And this investigation is aimed to be helpful to the country.

Mr. DONALD. Senator Harding, all I can say is that we have got a man—we have recently appointed a man—to go from ship to ship in New York and give us a physical account of what every ship is doing that is in the Army employment; and we are averaging it up to find out what those ships are doing, how long they are detained, and so on. Your point is well taken, and I think that that information is a good thing to have.

Senator HARDING. Well, let me get at it in another way; can you say offhand approximately what the Government is paying per day for requisitioned ships?

Mr. DONALD. Well, they are supposed to pay to us the same amount as we pay for all ships, and we turn them over at the same rate as we get the privately owned ships for.

Senator HARDING. Let me put it another way: Is the service price for requisitioned ships approximately $500,000 a day?

Mr. DONALD. I do not quite grasp what you mean.

Senator HARDING. Well, I wish I could make myself clear. Is the payment to the private owner for requisitioned ships approximately $500,000 a day?

Mr. DONALD. I can not give you the figures on that.

Senator NELSON. You do not mean that for one ship, do you?

Mr. DONALD. No; he means the whole number of ships.

Senator HARDING. No; I mean all requisitioned ships.

Mr. DONALD. I can not tell you that.

Senator HARDING. The point I am trying to lead to is how much we are losing through the inefficient management of ships.

Mr. DONALD. Yes, sir.

Senator HARDING. Can you tell me how long a ship is employed in making a round trip to our base in Europe from New York?

Mr. DONALD. So far as I can understand, the average is between 50 and 60 days.

Senator HARDING. Is that above or below the normal mercantile voyage under private ownership?

Mr. DONALD. Well, Senator Harding, that is more than the usual time. I should say that such a voyage of a cargo ship should be made in about 45 days. But there are certain considerations to be taken into account, considerations in regard to the receiving points on the other side, and new arrangements to be made there, which I would not venture to offer an opinion on at all; perhaps there is some detention there which we know nothing about.

Senator HARDING. Well, does your board know what causes the delays at the American end of the line?

Mr. DONALD. Yes. I have just stated that we have established an officer in New York now for the purpose of giving us all the information as to how the Army ships, and all ships, are being detained in New York, if such is the case. We know that some of them are being detained for want of bunkers or the difficulty of getting fuel for them.

Senator NELSON. And waiting for letters of assurance?

Mr. DONALD. Oh, no; the actual scarcity of coal.

Senator HARDING. Do you think that Congress can be of any help in bringing to an end the conflict of authority in handling cargoes in New York?

Mr. DONALD. I think that if the departments all get together and coordinate and cooperate it can all be done without any assistance of that kind.

Senator HARDING. You know of nothing that could be done at the legislative end to assist?

Mr. DONALD. No; I do not think so.

Senator HARDING. You do think something ought to be done, however, do you not?

Mr. DONALD. Well, you have created a board, I think—the War Port Board—in New York, which I think will assist matters. Mr. Hurley has appointed, or rather I think the President has appointed a committee there. There is no doubt about it, that if there is any

detention it is only natural that when things get down to a settled groove matters will improve in the dispatching of ships. There is no doubt about it, because there are too many eyes on the situation just now.

Senator NELSON. Mr. Donald, how many of these commandeered ships that you have taken over are actually in service now? I believe you said there were 39 that you have commandeered—or how many all together? I think Mr. Hurley mentioned it yesterday. Perhaps I had better ask him. Do you remember, Mr. Hurley, how many commandeered ships you have?

The CHAIRMAN. How many ships have been commandeered?

Mr. HURLEY. Four hundred and ninety-odd, I think.

Senator NELSON. Four hundred and ninety ships in all?

Mr. HURLEY. I believe it is 431.

Senator NELSON. Four hundred and thirty-one?

Mr. HURLEY. Besides 11 we are building, of steel ships, there are four hundred and some odd that have been commandeered.

Senator NELSON. Four hundred and some odd ships that have been commandeered?

Mr. HURLEY. Yes.

Senator NELSON. How many of these commandeered ships are actually in the service now?

Mr. DONALD. Well, all the ships were taken at a certain date, and if they happened to be at an American port on the 15th of October they were taken over on that day, but if they were at some foreign port they had to come back to the United States before they were commandeered, so that they all automatically fell into the hands of the Shipping Board when they came back here.

Senator NELSON. But these were ships mostly in our yards that you have commandeered?

Mr. DONALD. No; I am talking about the American ships, which I understood you were talking about.

Senator NELSON. No; I referred to these commandeered foreign ships that you took. How many of them are actually in service?

Mr. DONALD. Well, I think it is about 50 or 60 all together, is it not, Mr. Sisler?

Admiral BOWLES. There are 49 vessels which have been taken into the service.

Senator NELSON. There are 49 vessels taken into the service of those that were commandeered in the yards.

Mr. DONALD. Of those that were commandeered in the yards; yes.

Senator NELSON. I refer to all ships, foreign and American.

Admiral BOWLES. Yes; all foreign and American ships.

Senator NELSON. The sum total, then, is that one ship, that was referred to yesterday, has been built, and then these 49 ships, or 50, in all, are the additions that we have secured through the operations of your board and your corporation?

Mr. DONALD. The answer to that, I think, is that we have taken steel ships, commandeered steel ships, and also a number of wooden vessels built on the Pacific coast and elsewhere, under 2,500 tons, and in fact, those power boats that have been built have not come under that commandeer; so they have been available to be delivered to their owners.

Senator NELSON. Those small ships are delivered to their owners?

Mr. DONALD. Yes.

Senator NELSON. And you did not commandeer them?

Mr. DONALD. No.

Senator NELSON. Has there been any trouble about getting competent seamen to man these vessels?

Mr. DONALD. Not so far; but we expect to have difficulty when this tremendous amount of tonnage comes forward to be delivered; we are making new arrangements to educate seamen to fill the requirements.

Senator NELSON. From what sources do you expect to recruit your seamen?

Mr. DONALD. We expect to recruit them mostly from around the ports; but to some extent also inland. Mr. Howard has the idea of going to some of the Middle States and getting young men from there.

Senator NELSON. Yes.

Mr. DONALD. He has a system which he is working on, and some friends are working with him, to get men to come to the seaboard and learn to be sailors.

Senator NELSON. Our Navy is getting a lot of recruits in the Middle West.

Mr. DONALD. Yes, they are.

Senator NELSON. In the rural communities.

Mr. DONALD. Yes. Admiral Bowles will make a complete answer to that question, Senator Nelson, regarding the commandeered ships. Is that satisfactory to you?

Senator NELSON. Yes. How many domestic ships, and how many foreign ships, were commandeered? How many of each class?

Admiral BOWLES. Of the requisitioned vessels building in the private shipyards on August 3, there have been completed and placed in the service up to date 49 ships.

Senator NELSON. Forty-nine ships?

Senator JONES. What tonnage?

Admiral BOWLES. Of a total of 300,865 dead-weight tons. Now, in addition, the Shipping Board have repaired and put in service former German and Austrian steamers, as follows: In the service of the Army, 22 vessels, or 182,555 tons.

Senator NELSON. Those have been turned over to the Quartermaster's Department of the Army?

Admiral BOWLES. I do not know. I only know it is the Army.

Mr. DONALD. I will answer that question by stating that we have about 28 ships chartered to the allied Governments; to the Italians, the Russians, and the French. And those vessels have been running for them for the last four or six months, since they were repaired.

Admiral BOWLES. May I interrupt one minute? In the service of the Army, but operated by the Navy, there are 18 steamers of 215,842 tons. Now there are in the service of the Army, of the ex-German and ex-Austrian vessels, owned by private parties, 4 steamers of 23,950 tons, making a grand total of 44 vessels of 422,347 tons.

Now these two classes that I have given you represent the additions to the merchant marine made through the operation of the Shipping Board and the Fleet Corporation to date.

Senator NELSON. Yes; that is just what we want—the facts.

Mr. DONALD. Yes; that is it.

Senator HARDING. May I ask the admiral a question, Mr. Chairman?

The CHAIRMAN. Yes; certainly.

Senator HARDING. You just reported 422,000 tons in the service of the Army, either directly or through the Navy. What is the estimated tonnage necessary to support a unit of the Army; what is necessary for each individual?

Admiral BOWLES. I do not know.

Mr. DONALD. I have heard it stated at various amounts.

Admiral BOWLES. And I do not know anybody who does know.

Mr. DONALD. No; it is very difficult to get at that. I think the English estimate is 8 tons per man—per month, I guess it is.

Senator HARDING. Eight tons per man per month?

Mr. DONALD. Yes.

Senator HARDING. That is hard to believe in itself. I want to ask you, Mr. Donald, a more pertinent question.

Mr. DONALD. Yes, sir.

Senator HARDING. In the report of your board here [indicating] you say:

"The operations of the vessels are intrusted, in large part, to the companies by whom they were formerly controlled, but all receipts have been for Government account."

Would you mind stating just what that arrangement is?

Mr. DONALD. Well, it means, sir, that we pay so much for the commandeered price of the ship.

Senator HARDING. That is from $1,000 to $3,000 a day, is it not?

Mr. DONALD. Well, I will state it in this way. Suppose a 5,000-ton ship brings in for her monthly hire from the Government, say, $55,000. We place that ship in the hands of an agent, and he goes out and is supposed to get us back our hire out of the freights which are charged to go over there. In other words, his freights will be very much higher than what we pay by the month; but the expenses of the ship, such as for coal and port charges, are taken in and added to the hire, and the rate which comes out proportionately for that is the rate that is charged, the rate which these parties are supposed to bring in to us. Perhaps I have not made it quite clear.

Senator HARDING. Yes; except that I would like to have you make it a little more definite.

Mr. DONALD. Suppose you take a vessel going over to France, and she costs $45,000 in hire, and she makes the trip in 45 days. That is $30,000 for one month and $15,000 for the other half month, making $45,000 for the hire of that ship. Then you have got your port charges, and your stevedoring charges, and your wharfage, and the charges at the other end, and the charges for fuel, and you put those all together; and the freight which we are supposed to get back is intended to recompense us for all of those expenses.

Senator HARDING. I wanted you to be a little more specific about what goes to the owner. He gets, of course, the $30,000?

Mr. DONALD. He gets $30,000 for that ship; he places the ship at so much; that is $1,000 a day he gets, is it not?

Senator HARDING. Yes.

Mr. DONALD. Out of that he has got to pay wages, provisions, engine and deck stores, and insurance; he must pay his own marine insurance. But the Shipping Board, if he goes into the war zone, pays him for his war-risk insurance; we take that risk ourselves. Out of his monthly hire he pays wages, provisions, engine and deck stores, and marine insurance.

Senator NELSON. And fuel?

Mr. DONALD. No; not fuel. The time charterer always pays for the fuel. But there are two kinds of charters—there is the net form of charter, which means that we are simply giving the bare boat, and the charterer supplies the crew and all the expenses, if we elect to do it that way.

Senator HARDING. You have the two kinds of contracts in force?

Mr. DONALD. We have two kinds of contracts; yes. Of course, they are just figured proportionately, you understand, so far as the monthly hire is concerned.

Senator HARDING. Then there are literally no earnings for the owner of the chartered vessel, save either the net charter, if you give him a net contract, or the net of a gross charter after he pays his wage and provision charges, etc.?

Mr. DONALD. We try to fix the rate of charter at a reasonable price so that he can make some money for himself and so that he will be protected in the period after the war and not have his profits taken away from him entirely. And I think that it is a very good spirit that the shipowners in New York and elsewhere have shown in this matter; they have welcomed this arrangement, and said, in substance, "We know that the present rates are ruinously high, and we are willing to accept these lower rates," because, of course, they could do better with their ships if they were on a speculative basis in these war times.

Senator HARDING. The regulation is generally accepted with good grace, is it not?

Mr. DONALD. It has been; yes. I think I can safely say that it has been. There have been some complaints, of course; some people do not want to sign the charters, and they object to this, that, or the other thing; but as a rule the plan is coming along all right.

Senator HARDING. I was going to ask some other questions about operations, but if Mr. Carry is coming on the stand, as that is in his immediate department, I prefer to ask those questions of him.

Mr. DONALD. Yes; he will tell you exactly what is going on in New York now.

Senator NELSON. What suggestions have you to make, Mr. Donald, if any, in regard to the expediting of shipbuilding and increasing our tonnage? What can you suggest to the committee that ought to be done, either by your board or your corporation or by Congress in the way of legislation?

Mr. DONALD. Well, I do not know any more that can be done besides what is being done at the present moment. I think that the thing to do is to remove all obstacles, all possible obstacles or delays, and have business management, because it is an enormous task, requiring the greatest efficiency and energy, to get the ships out. That is the only general answer I can give you.

Senator NELSON. Can you or any member of your board tell the committee approximately how many vessels you expect to get ready

for use, say in January; how many in February; and how many in March, and so on, month by month under your existing contracts and program?

Mr. DONALD. Yes. Well, Admiral Bowles and Mr. Piez, who know more about this matter than I do, are to follow me on the stand, and they will give you all of that information.

Senator NELSON. Very well. I asked that question because we now know from the statements of Admiral Bowles and yourself what we have got in the way of new ships, and we are anxious now to ascertain what we can look for in the future—in the immediate future.

Mr. DONALD. That is a very necessary thing, too; it is very necessary.

The CHAIRMAN. What is the American Bureau of Shipping, Mr. Donald?

Mr. DONALD. The American Bureau of Shipping is a classification society, which is established in this country, similar to the Lloyds Register in England, which is a classification society giving a character to ships. We are charged by the law with helping all that we possibly can to facilitate the establishment of insurance companies and of insurance facilities in this country instead of on the other side, and we are endeavoring—my idea has been to endeavor to build up our American record classification society to be equal in its regard by the public to the English Lloyds, so that eventually we can have an insurance authority which will be as good as Lloyds English society. I do not know that I make that clear.

The CHAIRMAN. Yes; I understand that; it is to pass on the designs, the plans and the specifications for the ships that the fleet corporation is to build.

Mr. DONALD. I think Admiral Bowles can tell you more about it than I can. But I understand that two-thirds of the tonnage we are building is to be classed in the American record, and some is to be classed in the Bureau Veritas, which is a French classification society; and some is to be classed in the English Lloyds. But I think I am safe in saying that the American record has got the greatest number of ships that are to be classed; and I think it is proper that they should have.

The CHAIRMAN. Has there been any delay occasioned by that bureau supervising your plans and changing the designs of ships, and so on?

Mr. DONALD. Has there been any change by them?

The CHAIRMAN. No. Has there been any delay occasioned by them?

Mr. DONALD. I have not heard of any, Mr. Chairman. But Admiral Bowles will know the particulars about that.

The CHAIRMAN. All right; we can ask him.

Senator NELSON. That means, as I understand your statement, that you are aiming to establish what might be called an American Lloyds?

Mr. DONALD. An American Lloyds; that is the idea.

Senator NELSON. Of such character and standing as to make it a basis for insurance in this country equal to the English Lloyds?

Mr. DONALD. That is the idea.

Senator JOHNSON. In answer to Senator Nelson you said the first desideratum was the removal of delays or obstacles to the carrying out of the shipbuilding program.

Mr. DONALD. I mean when the builders come to us they should treat with us the same as if we were private owners, and go ahead. and if there is any change in the plans or any delays to be worked out there will be no delay on our part.

Senator JOHNSON. You have made your arrangements so that now you have perfected your business arrangements?

Mr. DONALD. Mr. Harvey and Mr. Piez have done that.

Senator JOHNSON. So that part of the delay, and that sort of obstacle already are eliminated.

Mr. DONALD. I should say so.

Senator JOHNSON. Are there any other delays or obstacles to which you referred in answer to Senator Nelson?

Mr. DONALD. The only delays that I know about are in regard to labor troubles, but I would prefer not to go into that.

Senator JONES. You say that you prefer not to enter into that—because you do not know anything about it?

Mr. DONALD. Well, I know in a general way, but Mr. Stephens has had that in his department, in our office.

Senator NELSON. I understand; I heard to-day that a strike was threatened immediately over on the Pacific coast. Do you know anything about that?

Mr. DONALD. I have not heard about that; no. Mr. Piez will probably know about it.

Senator NELSON. I heard that a strike was impending over there, in the southern part of California.

Mr. PIEZ. That is in the metal-trade shops at San Francisco. Word came to us about that in the morning. We are taking steps about that now.

Senator HARDING. Referring to these forty-some ships commandeered in yards under construction, do you recall what the percentage of those ships was completed at the time of commandeering; that is, how far were they along at the time?

Mr. DONALD. Well, of course, those ships—my impression is that those ships were not further along—I prefer not to answer that. Admiral Bowles will give you that.

Senator HARDING. Very well. I will ask the admiral when he comes on the stand. I had just as leave have it from one source as from another.

Senator JOHNSON. Mr. Chairman, before you proceed with another witness, may I ask Mr. Hurley one or two questions?

The CHAIRMAN. Certainly.

Senator JOHNSON. In the statement that you read yesterday there were 996 vessels for which contracts had been made. I want to know does that mean all contracts, some of which are not being executed and some of which are being executed?

STATEMENT OF HON. EDWARD N. HURLEY, CHAIRMAN OF THE UNITED STATES SHIPPING BOARD—Resumed.

Mr. HURLEY. The last four contracts of 326,000 tons—that was in December—which included the Alexandria yard and two other yards wherein the total amount of 326,000 tons is not in actual course of construction.

Senator JOHNSON. That is about 326,000 tons?

Mr. HURLEY. Yes.

Senator JOHNSON. Aside from that, all the other vessels are in process of construction and all of the other contracts in process of execution?

Mr. HURLEY. Well, these contracts are executed, these last four, but the construction of the ships in these particular contracts has been delayed, of course, on account of being new yards, two of them; but, generally speaking, yes.

Senator JOHNSON. Do you mean, then, that we have under construction about 5,000,000 of tonnage?

Mr. HURLEY. Under contract and construction, yes; about 5,000,000 tons.

Senator JOHNSON. I am eliminating the figures 517,000 of the tonnage; that would cover those upon which no work has commenced at all. Now, could you give me a rough estimate of what percentage of that tonnage will be completed in 1918? I do not care for it exactly, but approximately.

Mr. HURLEY. Admiral Bowles has those figures and will be glad to give it in executive session if you want it.

Senator JOHNSON. If you prefer that, that is all right. Now, another thing. When you came into the office in July there were many contracts, were there not, then pending which had not been executed?

Mr. HURLEY. Yes, sir.

Senator JOHNSON. Now, those contracts were turned over by Gen. Goethals to Admiral Capps, were they not?

Mr. HURLEY. Yes.

Senator JOHNSON. Is it not a fact, Mr. Hurley, that there was a delay in the execution of many of those contracts for periods of two months or more?

Mr. HURLEY. Yes; there was $100,000,000 worth of contracts placed on my desk the first day I arrived that were O. K'd by Gen. Goethals, and they wanted my signature to them, and I asked Admiral Capps to review them. He was to be the general manager and superintendent of these ships, and I felt he should have his initials on them in addition Gen. Goethals's; and a number of the smaller contracts were delayed two weeks—the smaller ones. Some of the larger ones went over, like the American International and the Submarine Boat, and the admiral worked out a little different contract on different terms, and they were not placed. I have not the exact dates as to when they were placed, but they were not placed for some time afterwards.

Senator JOHNSON. Some months; yes.

Mr. HURLEY. Well, I will give you the total—I think 1,142,000 in September—I am guessing at that——

Senator JOHNSON. So that substantially from the latter part of July until September, because Admiral Capps wanted to investigate or to do something with respect to the contracts, a very large tonnage was delayed, and contracts for a large amount were delayed, aggregating many hundred thousand tons.

Mr. HURLEY. Contracts were presented on July 28 to me, and they were not let until September.

Senator JOHNSON. And by you in July were turned over to Admiral Capps?

Mr. HURLEY. Yes; they were O. K'd by Gen Goethals.

Senator JOHNSON. At that time the dual authority existed in the board; you had not then perfected the business arrangement you have since perfected?

Mr. HURLEY. No.

Senator JOHNSON. And Admiral Capps was assuming, as he had a right to assume under the by-laws that existed, that he was to do the work that was necessary in respect to those contracts?

Mr. HURLEY. Yes; he had full authority. I do not know whether the American International contract and these larger contracts were in this—I am only speaking of the contract as a whole, approved by Gen. Goethals—I could not say that, but I know the American International contract was not sent up for some time afterwards.

Senator JOHNSON. Now is it not a fact that you made no substantial change in the contracts that were then before you?

Mr. HURLEY. There was some change as to the payments, and some contracts were reduced in number. If a man had an order for 10 ships, they may have reduced it to 8. They were wooden and steel contracts. The changes in the American International were along the lines of percentage and in terms of taking care of the housing of employees and details of that kind.

Senator JOHNSON. Well, whatever the causes, the delay obtained there for a considerable period of time in those contracts.

Mr. HURLEY. Yes; if the contracts were ready when Gen. Goethals went out and were for $100,000,000 and initialed by him, of course they were not placed until September, and they were delayed.

Senator JOHNSON. Well, it is a fact that they were?

Mr. HURLEY. Well, I could not say that the contracts for the American International were ready for me to sign——

Senator JOHNSON. Leave that out; there were contracts aggregating something like $100,000,000 in July, ready——

Mr. HURLEY. Yes.

Senator JOHNSON. And those contracts were ready for signature when you came into office, but Admiral Capps wanted to do something in respect to them, so the delay was occasioned? Is not that the truth?

Mr. HURLEY. That is my understanding, that there were several contracts held up.

Senator JOHNSON. Was there ever a time when you made an investigation of the building of wooden ships and found that there was a slacking up or a breaking down in the wooden-ship building program?

Mr. HURLEY. Yes; we investigated conditions in the steel and wooden ships—this production committee of which Mr. Piez was chairman. He investigated with Mr. Mason and Mr. Day, and they found that there was a shortage of timber in the different yards, and we brought that to the attention of Admiral Capps and Admiral Bowles; and it was brought about by the Southern Pine Association in not carrying out their agreement to deliver the timber; and we held a meeting of the committee of the wooden-ship builders, and we promised to give them additional lumber. There is no question but what the wooden program was delayed on account of this shortage of lumber over a period of two or three months.

Senator JOHNSON. Did Admiral Capps have difficulty with the people with whom you had contracted that caused delays?

Mr. HURLEY. With the lumber contractors or the ship contractors?

Senator JOHNSON. Both.

Mr. HURLEY. Well, the complaint about not getting their material; of course they had their plants there ready to equip and build their ships——

Senator JOHNSON. Well, the differences that existed between the Admiral or the mode in which he wished to proceed and those with whom you had contracted, caused the delay?

Mr. HURLEY. Yes; there was a difference between the contractors and the admiral; and when they changed the design, of course that caused delay. They had to add additional lumber to the original design.

Senator JOHNSON. And it was this sort of thing, was it not, the delays that had thus been occasioned, that led you to the conclusion finally that you had to change the business organization?

Mr. HURLEY. That was one of the reasons, Senator.

Senator JOHNSON. And, then, it was after the brief time that Admiral Harris was with you that Mr. Piez——

Mr. HURLEY (interposing). Mr. Piez came before Admiral Harris. He was there a couple of weeks before Admiral Harris was appointed.

Senator JOHNSON. And subsequently you found it necessary to delegate him such powers, as you desired to keep in yourself a sort of absolutism, in order that the work might be properly done?

Mr. HURLEY. To keep in touch with the program.

Senator JOHNSON. You can say that one of the faults of the situation, if there was any fault at all, arose from the fact of the peculiar organization with which you were dealing, can you not?

Mr. HURLEY. Yes; which could not possibly continue and obtain results.

Senator JOHNSON. What was the date of the change; what day was it made?

Mr. HURLEY. That is, the change in the by-laws?

Senator JOHNSON. Yes; the methods.

Mr. HURLEY. About the 15th of November; or about 15 days before Admiral Capps resigned. The appropriation was nearly exhausted on the steel-ship program, and that was one of the reasons why some of these contracts were not closed.

Senator HARDING. When we read of the destruction of tonnage by submarine warfare—that is, registered tonnage, according to the Lloyds's standard?

Mr. HURLEY. That is the gross tonnage.

Senator HARDING. Well, the registered gross tonnage.

Mr. HURLEY. Pardon me. The English give out the gross tonnage because that is less than the dead weight, and the Germans give out the dead weight. For example, on a 5,000-ton boat there is 5,000 tons gross, and it is 50 per cent more in dead weight, or 7,500——

Senator HARDING. Because of the compressed character in weight, or something of that sort?

Mr. HURLEY. Yes; the dead weight, of course, is the cargo.

Senator HARDING. What I am getting at is this: You talk of so many, we will say 6,000,000 tons in contemplation, and you speak of dead-weight tons. Now, that is at least one and a half times gross tonnage, according to the English standard of reporting, is it not?

Mr. HURLEY. It is 50 per cent more; the dead-weight, yes.

Senator HARDING. Now, why do we use the term "dead weight" instead of the standard term?

Mr. HURLEY. All our contracts read dead-weight tonnage, and everything here is dead-weight tonnage; we figure on so much for dead-weight ton in building a ship.

Senator HARDING. That is, so much cargo-carrying capacity?

Mr. HURLEY. Yes; so much cargo-carrying capacity. Those are the terms we use here.

Senator HARDING. Is that a modern adoption of the Shipping Board?

Mr. HURLEY. Oh, no; that has been in practice for years. If you were building a private ship to-morrow, you would get a bid on it at so much per dead-weight ton. That designates the amount of cargo it carries.

Senator HARDING. When you contract for the building of a ship, is that the tonnage you contract on?

Mr. HURLEY. The dead-weight tonnage?

Senator HARDING. Yes.

Mr. HURLEY. Yes. Admiral Bowles will explain the technical difference on that. There are a few things I do not know about that.

The CHAIRMAN. But dead-weight tons also include the coal, I think. It includes the tons of cargo and the coal.

Senator NELSON. The bunker coal; yes.

Senator JONES. To what date do these figures with reference to the ship contracting part come up?

Mr. HURLEY. In December there were four contracts let, for 35 ships—up to the 21st of December. I do not think there have been any contracts let in the last few days.

Senator JONES. That comes up to what date?

Mr. HURLEY. Up to the 21st of December.

The CHAIRMAN. We will now hear Mr. Piez.

STATEMENT OF MR. CHARLES PIEZ, VICE PRESIDENT AND GENERAL MANAGER OF THE EMERGENCY FLEET CORPORATION.

The CHAIRMAN. What is your connection with the Emergency Fleet Corporation, Mr. Piez?

Mr. PIEZ. Vice president and general manager.

The CHAIRMAN. How long have you been engaged with the Shipping Board or the Emergency Fleet Corporation?

Mr. PIEZ. I became a member of the committee that Admiral Capps and Mr. Hurley appointed late in September.

The CHAIRMAN. What duties did the committee have?

Mr. PIEZ. The duty of the committee was to give a report from an outside viewpoint of the condition in the shipyards.

The CHAIRMAN. What was your business prior to that time?

Mr. PIEZ. I graduated in engineering at Columbia and was for many years chief engineer and general manager of the Link Belt Co., and later its president. The Link Belt Co. had four plants and

some 20 offices. I was also president of the Electric Steel Co. of Chicago, of the Canadian Link Belt Co., of the Illinois Manufacturers' Mutual Casualty Insurance Co.

The CHAIRMAN. What was the Link Belt Co.'s enterprise?

Mr. PIEZ. It is a designer and constructor of labor-saving machinery; building machinery for unloading vessels, storing and handling coal, and handling freight and other materials in bulk or package.

The CHAIRMAN. Where is their plant or plants?

Mr. PIEZ. We have one plant in Chicago; one in Philadelphia; two in Indianapolis, employing something over 4,000 men.

The CHAIRMAN. You were the president; are you still president of that company?

Mr. PIEZ. I am working under leave of absence now. I have been president for over 12 years.

The CHAIRMAN. What number of men does the other company you mentioned employ?

Mr. PIEZ. Some 300; and we have in addition some 20 offices in various parts of the country.

Senator NELSON. May I ask a question here?

The CHAIRMAN. Certainly.

Senator NELSON. Do these companies you have been connected with furnish supplies to these vessels?

Mr. PIEZ. They do not.

Senator NELSON. Or any of the equipment?

Mr. PIEZ. They do not.

Senator NELSON. Any equipment of any kind to these vessels that are being constructed under these Government contracts?

Mr. PIEZ. No.

Senator NELSON. None of them?

Mr. PIEZ. None of them.

The CHAIRMAN. You have had considerable experience in organizing and business affairs for effective work?

Mr. PIEZ. I think I have; yes, sir.

The CHAIRMAN. What have you to say with regard to the present organization of the Emergency Fleet Corporation?

Mr. PIEZ. It is organized along the lines that I would organize it if I had full power. The control is vested in the President, who can delegate it to such officer as he elects.

The CHAIRMAN. You have not any recommendations to make as to any changes in the organization, then?

Mr. PIEZ. None.

The CHAIRMAN. So thus far, Mr. Piez, have you found any need of any further legislation, further grant of power or authority on the part of Congress?

Mr. PIEZ. No, sir.

The CHAIRMAN. What have you to say with regard to the way the work is now proceeding under the control and jurisdiction of the Emergency Fleet Corporation and Shipping Board?

Mr. PIEZ. I think the organization is running along business lines and needs some expansion to take care of the increasing needs and increasing development of our business; and that is something that we are giving attention to.

The CHAIRMAN. Are you one of the trustees of the Emergency Fleet Corporation?

Mr. PIEZ. I was elected to that position, yes, sir, on the 15th of November.

The CHAIRMAN. You are not in any wise connected with the Shipping Board except as the Shipping Board is connected with the Emergency Fleet Corporation?

Mr. PIEZ. That is all. They are the sole customer of the Emergency Fleet Corporation.

The CHAIRMAN. Have you any suggestions to make as to the speeding up, as to how that could be accomplished, or how any delays could be cut out or avoided?

Mr. PIEZ. We are engaged now in a very comprehensive scheme of getting an additional supply of labor and training it. That is our present concern. We have developed a comprehensive scheme of housing. We are shy of appropriation for housing and we have got to work in conjunction with both the Navy and the War Departments.

In order to make our plans effective—because our housing problem is serious, largely in the congested districts in the East, and those districts are congested not only by reason of the business that the Emergency Fleet Corporation has brought into them but particularly because of the work which the War Department, the ordnance, and munition work has brought with it—so that any broad scheme of housing should be developed for the three departments, under, I believe, a centralized control. Of course were there specific plants which could be served by a housing program we could undertake it, but where a community has got to be served, and where that community serves the three departments, it is only fair that the three departments should contribute. You see in Chester and Wilmington and Philadelphia and Bridgeport there is a tremendous amount of munition work as well as shipbuilding work. The congestion existed there to some degree before we came into the market, and it is a very difficult task to build houses in a community of that sort and assign them only to workmen employed in the shipyards. They are bound to drift. We have got to provide additional accommodation for all labor that the Government needs and brings into that locality.

The CHAIRMAN. Was there any way of avoiding that situation by having plants developed, built up elsewhere, in less populous communities?

Mr. PIEZ. Well, I think that situation created itself a little, because prior to our entering the war the eastern manufacturers were very much more aggressive in the securing of contracts for foreign accounts than those in the West, and there was a very considerable congestion in those districts, before we went into the war. Naturally the existence of shipyards along the Delaware and along the Chesapeake brought further development along that line. It was natural that the original contracts should have been placed in those very districts. Our policy since has been to distribute that, and in all new contracts we make we go very carefully into the desirability of the location, the amount of labor that is available, and its freedom from congestion, and its freedom from difficulty in the matter of housing. That is being very carefully considered now and has been for sometime.

The CHAIRMAN. Are the plants now working full time as far as you know?

Mr. PIEZ. In steel I think that is true, very largely. In wood that is not the case, because we are still hampered by lack of the large timbers.

Senator HARDING. Apropos of that did not the modification of the original design of wood ship, in order to make it a stable vessel, require a piece of timber that is rather difficult to get?

Mr. PIEZ. Yes; but the Southern Pine Association agreed to make delivery of it.

Senator HARDING. Well, has the Southern Pine Association been able to get such timber anywhere in the South?

Mr. PIEZ. Not to the extent that it should have. They have fallen down very seriously.

Senator HARDING. Has it in fact been able to get any at all?

Mr. PIEZ. Only for a few schedules thus far. We are bringing a large amount of lumber of that size from the Pacific coast.

Senator HARDING. Can you say whether it would have been possible to have modified the design of the wooden ships so that timber could have been made available for that construction?

Mr. PIEZ. Well, I am not versed technically in the construction of vessels, and not well enough versed to answer that question definitely.

Senator HARDING. Well, as a matter of fact, is it not so that the exacting requirements of timber and the wooden ships have very much retarded the program and made it almost impossible to build?

Mr. PIEZ. I should not say that; I think the structure as it exists to-day is necessary to the strength of the vessel itself.

Senator HARDING. That is not in dispute——

Mr. PIEZ (interposing). Well, it is a very difficult matter to substitute any frame structure for a solid wooden beam in wood. In steel, of course, you can build up a girder. You can hardly do that in wood. You can not superimpose one beam on another and get equivalent strength. We have had to do that even in these beams, but we have had to have timbers of considerable depth, 12 by 28, I think, and of considerable length, 36, I think——

Senator JONES. Why not let more of those contracts in a country where those timbers are available?

Mr. PIEZ. I think that would be a good plan.

The CHAIRMAN. 14 by 14 by 48; that long, I think. Of course, that timber can be had.

Mr. PIEZ. It is a rare timber in yellow pine.

Senator JONES. It is not very rare on the Pacific coast.

Mr. PIEZ. No.

Senator HARDING. Does not the Ferris design require a 30-inch timber for the keel?

Mr. PIEZ. I do not know, Senator. I have not charged my mind with it. The specifications are available. I think they use a timber 26 or 27 inches each, but only in the design that is being built on the Pacific coast; but I have had so many other matters pressing—you can develop that by the examination of Admiral Bowles or the head of the technical division.

The CHAIRMAN. Immediately under you, as indicating the practical operation of business now, first state in a general way what is actually done.

Mr. PIEZ. I want to clear up this thought that I have seen emphasized in the last day or two, that what we have done in our organization is to reorganize along lines that exist in large corporations, in which the general manager is an appointed officer to whom certain functions are assigned. He is not clothed with absolute power over the entire conduct of affairs. That was the case in the Emergency Fleet Corporation.

The CHAIRMAN. Originally?

Mr. PIEZ. Originally; and the thought of that has been carried through even to the present day, perhaps, that the general manager should be clothed with complete authority. Now, the organization as it exists to-day is that executive control of the management is vested in the president. He has delegated to me as much of that as is necessary to the proper conduct and discharge of the affairs of the company.

Senator NELSON. He can overrule you at any time?

Mr. PIEZ. Well, that is the case in every business concern. I was vice president and general manager myself before I became president. If he has the ultimate responsibility he ought to have the authority, and he could then make a change quickly and promptly any time he chose. If I prove unsuccessful or incompetent I want to be relieved promptly, and he ought to have the authority in this emergency to relieve me promptly.

The CHAIRMAN. I think so.

Mr. PIEZ. I have been clothed with complete executive control over the management of affairs.

Senator NELSON. What affairs?

Mr. PIEZ. The affairs of the Emergency Fleet Corporation—the entire construction program.

Senator NELSON. And you had no experience in the construction of vessels before you became a member of this corporation?

Mr. PIEZ. Not in that sense; no. I had large experience in the construction of large engineering works—works of considerable magnitude.

Senator NELSON. But not shipbuilding?

Mr. PIEZ. No; not shipbuilding.

Senator NELSON. And you do not know anything about it except what you have acquired lately, do you?

Mr. PIEZ. No.

Senator NELSON. Well, do you not think it would be advisable to have a practical shipbuilder occupy a position like yours—a man who is versed in shipbuilding instead of a man who had run a belt line?

Mr. PIEZ. Well, pardon me, Senator——

Senator NELSON. It is rather personal, but we are after expert opinions.

Mr. PIEZ. Certainly; and I am perfectly willing to give you my opinion. I had an engineering training and for many years I acted as engineer. The problems in any large organization are not wholly technical; there are many problems of policy, of management, of organization, that are in most cases of greater moment than are the technical problems, and you will find at the head of every big institution either an unusual combination of technical skill and executive ability or an executive with a technical aide.

Senator NELSON. That is simply an argument you are making against my proposition, against what I suggested.

Mr. PIEZ. I am giving you my views.

Senator NELSON. It is simply an argument why a practical shipbuilder is not necessary in your position.

The CHAIRMAN. What have you in the way of aides in that direction, what departments are under you?

Mr. PIEZ. All the departments.

The CHAIRMAN. Name them, please.

Mr. PIEZ. The technical department is under the direct supervision of Mr. Ferris, who, I have been told, is one of the most competent designers of cargo ships in the country. The construction department is under Admiral Bowles—the construction of steel ships. It is unnecessary for me to give his record, because he is a very well known, a widely known constructor. My immediate aide is Mr. Ackerson, also a naval constructor. Mr. Radford is a graduate of Annapolis and was a naval constructor.

Senator JONES. He had nothing to do with merchant ships?

Mr. PIEZ. No; he had nothing to do with merchant ships, but Mr. Ferris has a very large staff, and Mr. Ferris is responsible for all the designs. The district officers are all men who have had experience in construction, and so are the inspectors, and the entire corps that come in contact with the practical side of our operations have had practical experience in construction.

Senator NELSON. But do you not find it rather difficult, as a nonexpert, to manage these experts that you refer to here—Admiral Bowles and these other practical men, both in designing and shipbuilding? Do you not find it uphill work, you never having engaged in shipbuilding, to direct those men? You are their superior, are you not?

Mr. PIEZ. I am. I do not find it very serious work; no, sir.

Senator NELSON. Do you not think that is putting the cart before the horse—to put you ahead of those practical men?

Mr. PIEZ. Well, it depends upon which side of the program you want to give position to. There is the question of policy and arrangement of work, and decisions may relate to a question of policy——

Senator NELSON. The decision comes from the President, and he is your superior officer.

Mr. PIEZ. I mean the organization policy. The general policy as to construction, the construction program, come from him and are developed through the means that the Shipping Board determines.

Senator NELSON. You took the place of Admiral Capps and of Admiral Harris. Is not that the place you occupy?

Mr. PIEZ. That is the place I occupy. I did not seek it, Senator; I want to say that.

Senator NELSON. Oh, no, no——

Mr. PIEZ. And I came very reluctantly.

The CHAIRMAN. To trace the methods of the actual business transactions that come under your supervision, Mr. Piez, how do they originate and what are the steps leading up to your action?

Mr. PIEZ. You mean the origination of a contract?

Senator NELSON. Yes.

Mr. PIEZ. Of course, the first department is the technical department. They have developed the various standard designs that are

being fabricated in our own agency yards. The contract division accepted certain designs which have been successfully used by existing shipyards. The contract is entered into on certain plans that we present to the bidders. We have a fairly definite program of construction ahead of us. That program is determined upon largely by the needs as the gentlemen of the Shipping Board in conference with the Emergency Fleet Corporation have determined—so many tank vessels, so many cargo vessels of a certain size, and so many of another size, single or double deck, as the case may be. The investigation then proceeds as to the character and competency, the financial ability and responsibility of bidders, and after a decision of whether the locality selected by the bidder is a proper locality to furnish labor without undue congestion and without undue expense for housing, the award is made after recommendation by the contract department, and now by the steel construction department. The contract then comes up to me for consideration and signature.

The CHAIRMAN. Who is the head of the contract department?

Mr. PIEZ. Mr. Radford. He was under Admiral Capps.

The CHAIRMAN. And the steel construction——

Mr. PIEZ. Admiral Bowles.

The CHAIRMAN. Then they come to you?

Mr. PIEZ. Then the contracts come to me; yes.

The CHAIRMAN. You have not had experience enough to state yet about any delays—whether any delays have occurred in handling contracts?

Mr. PIEZ. We have expanded our contract department recently in order to avoid delays. Of course, it sometimes takes time to look into the competency of contractors. We have found it best to do that first rather than to award the contract and find that we were dealing with men who were too inexperienced or whose condition would make rapid progress impossible.

The CHAIRMAN. If matters are presented to you which call for revision or change in the contract, you take it up with the heads of these other departments?

Mr. PIEZ. Yes. The contracts, of course, are approved by our legal department before final signature.

The CHAIRMAN. Does the committee desire to ask Mr. Piez any questions?

Senator HARDING. I do not know that it is particularly pertinent to ask of this witness, but I was observing the change in the by-laws of the institution. It is rather a revealing thing to me. Have you noticed from your observations, Mr. Piez, whether the conflict of authority under the original by-laws between the general manager and the president was the source of any delay in the progress of the Fleet Corporation?

Mr. PIEZ. No; I have not noticed that in the last five or six weeks while I have been in Washington.

Senator HARDING. Do you know whether any questions ever arose over the authority under the original by-laws for the general manager to have oversight and management of the business and the affairs and the power to employ and discharge all clerks, employees, and agents and determine their salaries?

Mr. PIEZ. I do not know as to that.

Senator HARDING. Do you think that the wide grant of authority given the general manager under the original provision was calculated to bring about a conflict of authority?

Mr. PIEZ. With the president as standing in the light of assuming public responsibility for the program; yes.

Senator HARDING. You think, then, that the situation has been improved by utterly wiping out the grant of authority to the general manager of the corporation?

Mr. PIEZ. I do. There was a possibility of trouble there.

Senator HARDING. Under the new by-laws he has no authority except the orders of the president?

Mr. PIEZ. No; the general manager is not included in the final by-laws.

Senator HARDING. He is eliminated entirely?

Mr. PIEZ. He is an appointed officer.

Senator HARDING. The duties are all devolved upon the president, and the vice president may act in his absence?

Mr. PIEZ. In his absence, and he has delegated to me the management of affairs even in his presence.

Senator HARDING. The most serious bone of contention, then, in the Fleet Emergency Corporation has been eliminated by the change of the by-laws?

Mr. PIEZ. I think so. The organization has been simplified and strengthened by reason of it, I think.

Senator HARDING. If the active man who formerly held the position of general manager now does not drive according to the policy of the directing head he can be removed by a wave of the hand?

Mr. PIEZ. Yes.

Senator HARDING. In other words, you have created one authority?

Mr. PIEZ. Centralized that authority, yes.

Senator JOHNSON. When you came into the board in September, I think it was—was that the time?

Mr. PIEZ. No; in November; November 15. I was simply asked to do some special work by Admiral Capps in the matter of reporting on certain conditions before that.

Senator JOHNSON. Was that in September?

Mr. PIEZ. I think it was about the middle or end of September. I am not definite as to the date, but it was about that time, I think.

Senator JOHNSON. Did you do that special work at that time?

Mr. PIEZ. Yes.

Senator JOHNSON. Did you make a report in writing?

Mr. PIEZ. I made a verbal report.

Senator JOHNSON. Was there any report in writing?

Mr. PIEZ. No; there was not.

Senator JOHNSON. Was that investigation you then made an investigation as to the various plants and their condition and the like?

Mr. PIEZ. It was simply to develop certain helpful suggestions that might occur to us after investigation of the plants.

Senator JOHNSON. Was it made because there had been any delay or any breaking down in the program?

Mr. PIEZ. I do not know as to that. Mr. Hurley told me that he would like to find out how conditions were, and our committee reported as nearly as they could on the condition of such plants as we investigated, reported orally.

Senator JOHNSON. Did you find out that there was a slacking up or delay in the building construction plan?

Mr. PIEZ. We had no previous knowledge of its rate of progress but we did find that practically all of the steel plants were working on a single shift, that the facilities were only being used a portion of the 24 hours that it was possible to work under emergency conditions.

Senator JOHNSON. They had facilities for continuous shifts, had they not?

Mr. PIEZ. They had; but in some cases they had material and in some cases they lacked material; but in quite a number of cases they had facilities for double turns.

Senator JOHNSON. Do you know whether or not prior to that time they had worked continuously on any occasions?

Mr. PIEZ. I do not.

Senator JOHNSON. What did you find in respect to the wooden-ship construction?

Mr. PIEZ. I found that there was some question as to the design. which we reported on.

Senator JOHNSON. Did you not find that there had been a delay, a slackening up?

Mr. PIEZ. Absolutely in that case, yes. There was a question of design and a very serious criticism of the delay in delivering the material.

Senator JOHNSON. How long were you engaged in the investigation that you suggest?

Mr. PIEZ. We ran into that situation of the wooden ship and immediately made our report, because we thought it needed immediate attention.

Senator JOHNSON. Do you know about when it was that you first undertook the investigation?

Mr. PIEZ. I do not know the exact date; no.

Senator JOHNSON. Do you know about how long it took you and how long it occupied?

Mr. PIEZ. The investigation was not very comprehensive, because we ran into this wooden-ship situation and immediately made a report, because we felt that the emergency fleet officers should know the condition there and take immediate steps to remedy it. and that practically concluded the work of the committee at that time.

Senator JOHNSON. How long were you engaged in the work?

Mr. PIEZ. Perhaps over a period of three or four weeks. I was not always present, but the other two members of the committee were, and we overlapped, so that some made an examination of one plant and others examined other plants.

Senator JOHNSON. From the time you began the investigation until you made the report——

Mr. PIEZ (interposing). Some three or four weeks.

Senator JOHNSON. Three or four weeks elapsed?

Mr. PIEZ. Yes.

Senator JOHNSON. You found the wooden-ship situation was so serious that you wanted to make an immediate report?

Mr. PIEZ. Yes.

Senator JOHNSON. And it was serious because the program was held up, was it not?

Mr. PIEZ. Yes; because the program was held up.

Senator JOHNSON. And the reasons it was held up were what, please?

Mr. PIEZ. Changes in specifications, repeated changes in specifications, the necessary modification or strengthening of the bottoms of the vessels, and then, more particularly, the failure to deliver the necessary pieces of lumber.

Senator JOHNSON. Who made the repeated changes in specifications to which you advert?

Mr. PIEZ. They were made by the Emergency Fleet Corporation; I don't remember what department.

Senator JOHNSON. Under what department would they be—under Admiral Capps?

Mr. PIEZ. I presume so, he being the general head; but more particularly under the technical department.

Senator JOHNSON. Now, do I correctly understand from that that there would be specifications given to those shipbuilders, and then from our central authority—that is, officially from Admiral Capps—there would come changes in those specifications?

Mr. PIEZ. Yes. Of course I want to say this, Senator, that in all engineering work that is quite usual; as you develop your plans you make changes——

Senator JOHNSON. You did not deem it usual in this instance, because you thought it was of sufficient importance to immediately report.

Mr. PIEZ. Well, of course, here was the serious question of whether the strength was adequate.

Senator JOHNSON. Were there any other things that you observed in your investigation that caused delay besides the steel companies not working continuously or on double shifts and those that were dealing with the wooden ships having specifications changed, and lack of material; was there any other cause of delay?

Mr. PIEZ. There was some complaint concerning the adjustment of requisitioned vessels, but that was merely a thing that affected the mental attitude of the builders.

Senator JOHNSON. You were quite exercised over the situation that you found after investigation, were you not?

Mr. PIEZ. Fairly so; yes.

Senator JOHNSON. Your committee were in concurrence with that, were they not?

Mr. PIEZ. Yes. More particularly on the wooden-ship program.

Senator JOHNSON. You felt that the program had been endangered and it was being unduly delayed, did you not?

Mr. PIEZ. Yes.

Senator JOHNSON. Now, that delay had been going on for how long a period, if you please?

Mr. PIEZ. It had been going on for some weeks at that time without any hope of immediate relief, because the large timbers did not seem to be available.

Senator JOHNSON. And you felt that our whole program was endangered unless relief was afforded, did you not?

Mr. PIEZ. Yes.

Senator JOHNSON. That was the reason for making that report at once, was it?

Mr. PIEZ. Yes.

Senator JOHNSON. And that was made to remedy the delay?

Mr. PIEZ. Yes.

Senator JOHNSON. What is the International Co., if you please?

Mr. PIEZ. The American International Co.?

Senator JOHNSON. Yes, sir; or who or what?

Mr. PIEZ. The American International Co. as organized—I have not looked them up recently, but I am getting this from the papers—they were organized largely to take care of foreign trade, some years ago, and afterwards expanded and purchased the New York Shipbuilding Co. This was before our entry into the war and before the organization of the Emergency Fleet Corporation.

Senator JOHNSON. Give me one or two instances of those who compose it, please. Who is at the head of it; what financial concern is back of it?

Mr. PIEZ. I think the National City Bank.

Senator JOHNSON. What individual is the head of the institution?

Mr. PIEZ. The man I come in contact with is Mr. Robinson, who is president of the operations at Hog Island.

Senator MARTIN. Will you tell me whether it is usual for a ship designer to furnish plans and specifications for a ship, which plans and specifications do not provide for the strength adequate for the work the ship is to do?

Mr. PIEZ. I do not think so.

Senator MARTIN. That was no more nor less than incompetency then?

Mr. PIEZ. Well, the wooden-ship building art was a rather lost art; there were no specific rules——

Senator MARTIN. But that does not answer the question. It may be because the art was lost, but that was incompetency, was it not?

Mr. PIEZ. I am not posing as an expert in that. I am simply reporting the conditions as I found them.

Senator MARTIN. But it does not take an expert to know that a man who undertakes to furnish a design for a ship ought to furnish plans and specifications that will provide the necessary strength for the work the ship is to do, and if those plans and specifications do not call for the necessary strength, then you would call the man who furnished them incompetent, would you not?

Mr. PIEZ. I want to say this; that the design had been passed on by the American Bureau——

Senator MARTIN. I do not care who passed on it. My question is, is it not incompetency in the ship designer to furnish plans and specifications that do not provide the strength necessary for the job the ship has to do or will be called upon to do?

Mr. PIEZ. That may be a question of opinion as to the strength. We are simply reporting a condition that we found.

Senator MARTIN. You think a competent ship designer, then, can furnish a plan for a ship that will provide for the ship being of such structure that it will go to pieces as soon as it goes into service?

Mr. PIEZ. I do not want you to commit me to that answer.

Senator MARTIN. I want to commit you to that or the other one.

Mr. PIEZ. I will stand by the first, then.

Senator MARTIN. That he would be incompetent, then?

Mr. PIEZ. I would not say that. I would say he was unfortunate——

Senator MARTIN. Unfortunately ignorant?

Mr. PIEZ. I would not go as far as that. Our technical staff was working under tremendously high pressure.

Senator MARTIN. I realize that and I do not expect perfection.

Mr. PIEZ. And there are certain conditions that ought to be borne in mind, I think, in criticism of that, and besides all that, there was a considerable lack of experience in wooden-ship building.

Senator HARDING. You say the design was passed upon by the American Bureau of Navigation?

Mr. PIEZ. I so understand.

Senator HARDING. Is that an organization comparable to the British Admiralty board?

Mr. PIEZ. No; it is the equivalent of the English Lloyds; it is the American Lloyds.

Senator NELSON. Do you not know that a lot of Norwegian shipbuilders had gone out on the Pacific coast and had built ships and were engaged in building wooden vessels on the Pacific coast before your corporation was organized?

Mr. PIEZ. I so understand. They built small vessels.

Senator NELSON. They were familiar with wooden-ship building?

Mr. PIEZ. I dare say they were. They turned out ships rapidly, but the design was small.

Senator NELSON. Is not about all the tonnage you got tonnage that came from those shipyards?

Mr. PIEZ. It is up to date, but it is not going to be very soon. Progress is being made in quite a number of yards; that is, on our wooden-ship building program, and I think the design meets the expectation and criticism of everybody now.

The CHAIRMAN. Without attempting to excuse anybody or justify anybody, might not this arise? In the opinion of a great many experts the design was a proper design and the ship would have the necessary strength for proper service, but in the opinion of others it might be improved on by giving it a little heavier timbers; might not that situation exist?

Mr. PIEZ. I think that was a situation. The design was pronounced adequate by some engineers, but the committee felt that there ought to be no question about it.

Senator NELSON. Who got up the designs for these wooden ships?

Mr. PIEZ. They were gotten up by the technical department, I think, of the Emergency Fleet Corporation.

Senator NELSON. Who were they—who were the men who got them up?

Mr. PIEZ. I don't know as to that. You would have to ask somebody else.

Senator HARDING. Was Mr. Ferris in charge?

Mr. PIEZ. I think he was. I am not certain as to that.

Senator HARDING. Who first approved the wooden-ship plan?

Mr. PIEZ. I am not certain as to that. I simply reported on a condition we found, without going into the antecedents at all.

Senator JOHNSON. Did you investigate conditions in the Gulf and the eastern and western ports?

Mr. PIEZ. No, sir; we did not. We ran into this situation in the East.

Senator JOHNSON. And your investigation was confined exclusively to the eastern conditions?

Mr. PIEZ. We started our investigation on the lake ports and then came down through the east, and then came upon this wooden-ship situation and made a report on it.

Senator JOHNSON. And there were no investigations of the Gulf or the western ports?

Mr. PIEZ. No, sir.

Senator JOHNSON. Is it the policy to continue wooden-ship construction?

Mr. PIEZ. We have felt that in the western shipyards, where the timber was available and where there were competent shipbuilders, we might continue it. I do not think we shall continue the program in the East, except to the extent of finishing out the contracts that have been entered into. In some few cases we will probably transfer contracts from yards that have not shown any progress to other yards that have shown ability to handle them.

Senator JOHNSON. But so far as the western shipyards are concerned the wooden-ship policy will continue?

Mr. PIEZ. Very probably; yes. Of course the vessels are very small, only 3,500 tons, and we do not want too many of those if we can get other steel vessels in their place.

Senator JOHNSON. Has the extent of the continuance of the policy yet been determined?

Mr. PIEZ. No. What we may do, simply for a time at least, will be transfer contracts that can not be carried out in existing eastern yards to western yards that are able to carry them out.

The CHAIRMAN. What do you find with respect to the steel situation? Do you think you can get an adequate supply of steel?

Mr. PIEZ. I think we can.

The CHAIRMAN. Who are the officers of the Southern Pine Co., with whom you have had dealings and promises to furnish timber?

Mr. PIEZ. I had no dealings with them, Senator, but I think it was Mr. Sullivan——

The CHAIRMAN. Do you know his initials?

Mr. PIEZ (continuing). If I am correctly informed. I do not know his initials. I think he is president of the Southern Pine Dealers' Association.

The CHAIRMAN. Are his offices here in Washington, or do you know?

Mr. PIEZ. I am uncertain as to that. Our purchasing agent, Mr. Brown, can tell you about that.

Senator NELSON. I think I did you a little injustice a while ago. I have looked these amended by-laws over, and if I correctly understand the position of general manager is practically abolished?

Mr. PIEZ. Yes.

Senator NELSON. Practically, there is no such thing?

Mr. PIEZ. Except by appointment.

Senator NELSON. It is not provided for in the by-laws?

Mr. PIEZ. No; it is not.

Senator NELSON. The original rule, section 4, reads like this [reading]:

The general manager shall be ex officio chairman of the executive committee. He shall have the general oversight and management of the business and affairs of the corporation, and shall have power to employ and discharge all clerks, employees, and agents; determine their salaries and prescribe and define their duties.

That is in the original by-laws?

Mr. PIEZ. Yes.

Senator NELSON. That is entirely eliminated now?

Mr. PIEZ. Yes.

Senator NELSON. And the by-laws now, as I understand them here as they are amended, do not provide for the office of general manager?

Mr. PIEZ. No, sir; they do not.

Senator NELSON. So that when my former question that I put to you in somewhat of a belligerent manner was asked, I thought you were general manager, as it was, under the old by-laws. There is no such thing?

Mr. PIEZ. There is no such office.

Senator NELSON. You are simply an employee under Mr. Hurley, the president of the Fleet Corporation?

Mr. PIEZ. That is all.

Senator NELSON. Like any of the others of these gentlemen?

Mr. PIEZ. That is all.

Senator NELSON. And therefore, indirectly, I have done you a little injustice.

Mr. PIEZ. I did not so take it, Senator.

Senator NELSON. I did not mean to do that.

Mr. PIEZ. I know that. I thought you were out for information, and I was certainly willing to give it.

Senator HARDING. Mr. Piez, as a little remnant of this wooden-ship matter, I noticed in the press last evening or the evening before, that a suit had been brought against the Emergency Fleet Corporation. Is that a remnant of the fiasco of the wooden ships?

Mr. PIEZ. I have not inquired as to that. I saw that myself, but I am not certain. Judge Payne can answer that question better than I can.

Senator JONES. Mr. Piez, these designs, for these wooden ships were known as the Ferris design, were they not?

Mr. PIEZ. Yes.

Senator JONES. And he got them up?

Mr. PIEZ. So I understand.

Senator JONES. He was supposed to be an experienced man along those lines?

Mr. PIEZ. Very; I think he is. I don't know how experienced he was in wood designs.

Senator JONES. Oh, you do not know how experienced he was in that?

Mr. PIEZ. I do not know. He is reputed to be the best cargo-ship designer in the country.

Senator JONES. Who found out that these designs were inadequate?

Mr. PIEZ. Pardon me.

Senator JONES. Who found out that these designs were inadequate?

Mr. PIEZ. There was some criticism by one of the contractors who had consulted a naval architect. The criticism came from there—the first criticism. There was some question about the location of the power plant, whether it was to be in the center or the stern of the boat, and other questions were brought up at that time.

Senator JONES. Matters of that kind ought to be pretty well settled by a man who has had large experience and had acquired a good reputation as a designer, ought there not, without any trouble?

Mr. PIEZ. I think so.

Senator NELSON. Senator Jones, let me interrupt you. Do you recall that wooden-ship building was almost obsolete, except up in Maine, where they build a few ships, but otherwise it was obsolete in this country, and the first men who started it up after the war commenced were a lot of Norwegians, who came over to the east coast and opened yards? That is the situation.

Senator JONES. But Mr. Ferris came into this corporation with a reputation of being a great designer. Where he acquired it I do not know.

Senator NELSON. It must have been from Norway, then. [Laughter.]

Senator JONES. That is just what I was going to ask, whether he had ever been over in Norway, or whether he is a Norwegian or not.

Mr. PIEZ. His name would not suggest that.

Senator JONES. You do not know whether he has had any experience——

Mr. PIEZ. No; I do not know as to that.

Senator JONES (continuing). As to the construction of wooden ships before he came in here or not?

Mr. PIEZ. No, sir.

Senator JONES. He is a regular employee of the corporation, is he not?

Mr. PIEZ. Yes.

Senator JONES On a regular salary?

Mr. PIEZ. Yes.

Senator JONES. Any design that he may have gotten up or submitted would be the property of the corporation?

Mr. PIEZ. Yes.

Senator JONES. And he would not be permitted to charge contractors or shipbuilders for that design?

Mr. PIEZ. Not unless his contract of hire gave him that privilege.

Senator JONES. There would not be any contract authorizing him to charge for that design, would there?

Mr. PIEZ. I do not know. A man who is taken out of the consulting practice may be permitted, I presume, to continue a certain part of his business. I do not know what his contract was.

Senator JONES. But, if he is furnishing design for the Emergency Fleet Corporation to be used by it, there surely would not be a contract permitting him to sell that design to contractors, would there?

Mr. PIEZ. There ought not to be.

Senator JONES. Do you know whether or not there was any such contract with Mr. Ferris?

Mr. PIEZ. I do not.

Senator JONES. You do not know whether he made any charges to the contractors?

Mr. PIEZ. I do not.

Senator JONES. You stated a while ago that you were short of money, and that that caused some delay or worked some delay in your housing plant?

Mr. PIEZ. Yes.

Senator JONES. Have you submitted any estimate to the Congress?

Mr. PIEZ. That estimate is incorporated in the suggestions in the report to be made by the housing committee, which is headed by Mr. Eidlitz.

Senator JONES. But that report has not been made yet.

Mr. PIEZ. I am not certain as to that.

Mr. JONES. So there has been no estimate sent down to Congress?

Mr. PIEZ. No. Congress is not to blame in that matter.

Senator JONES. You can not charge Congress with any delay there?

Mr. PIEZ. I simply wanted it reported so as to develop the urgency of it and ask for prompt consideration of it when it does come up.

Senator JONES. And whatever delay is occurring is occurring by reason of the failure of the administrative part of this corporation?

Mr. PIEZ. Yes. Of course, it is a rather difficult task to get the three to coordinate and develop their individual needs.

Senator JONES. I appreciated that, but I wanted it understood where the delay was resting.

Mr. PIEZ. No; I have made no charge as to that.

Senator JONES. I want to ask you whether or not in letting contracts for ships there have been conditions imposed upon any contractors along this line: That if they would take a contract for building a certain number of tank steamers, for instance, they would also be given a contract for certain other ships? Has any proposal of that sort been made to any contractors?

Mr. PIEZ. We have, I think; yes. We are very much in need of tank ships, and the contractors are not usually very willing to make them, because it requires a longer time to put them through.

Senator JONES. Do you not think, as a matter of policy, it would be rather unwise to force a man who has a plant that is fitted for the construction of a certain class of steamers, to take another class of steamers that he is not fitted for building? Do you not think it would be better to give him a greater number of steamers than he does have facilities for building, and require others, who have, for instance, facilities for building tank steamers, to build a greater number of tank steamers?

Mr. PIEZ. There is not available capacity enough, Senator, to build them, because many of the concerns who have been building tank steamers are partially tied up with the Navy needs, and our own needs are so great in the matter of tankers that we are trying to induce some of these new people to take on a few of them.

Senator JONES. Of course, I can see the needs all right, and what I am trying to get at is the policy which will give you the most tank steamers.

Mr. PIEZ. We are trying to get every one that is geared up right to take all they can, but it requires a certain kind of mechanics, and they are not always available, and you have got to be a little chary

about placing too many in one shipyard, for fear of tieing up the entire capacity.

Senator JONES. Is it not better to place a particular class of steamers in a yard that is fitted to build those than it is to require a yard to change its equipment and change its machinery in order to take on some class of shipbuilding that they did not contemplate and are not prepared to do?

Mr. PIEZ. Yes. But we must encourage and almost compel some of them to undertake it, because we have not capacity enough as it exists to-day.

Senator JONES. You would not as a policy require a shipyard fitted for building one class of steamers to take on another class unless conditions made it so that that was about the only course that you could pursue?

Mr. PIEZ. Unless absolutely imperative. We are trying not to use any coercion in these matters, but we are developing our needs and explaining them, and we had a case recently in which the contractor demurred to taking too many of them, and we try to be just as reasonable as our needs will permit.

Senator JONES. I am not suggesting any objection to the coercion proposition. But what I was getting at was, if it would not be an unwise policy, from your explanation, to force onto a yard, the building of ships that they were not fitted for?

Mr. PIEZ. It would if we were absolutely free agents and did not have this tremendous emergency for tankers staring us in the face.

Senator JONES. Even with that it would not be wise if there are other yards that are fitted that could be forced to expand.

Mr. PIEZ. Yes.

Senator JONES. I mean looking at it from your standpoint.

Mr. PIEZ. In our opinion we have utilized all the facilities for tank building that we can get, even the old yards, especially fitted for it to accept.

Senator JONES. I have heard of some companies that were not fitted, they claim, for the building of tank steamers and did not want to do it, but that it was insisted that they should take a certain number of tank steamers before they would get contracts for other classes of steamers.

Mr. PIEZ. Wherever people show a capacity to build ships and we feel they can show a capacity for building tank steamers we are using every possible persuasion that we can to bring them to it. You see a large number of the vessels that we have got under contract are oil-burning, and the transportation of oil is a very big problem.

Senator JONES. I am not questioning that. I question what is the wise policy of building the ships. Of course you have got to have them built.

Mr. PIEZ. We have got to have them built.

Senator JONES. It seemed to me that the best thing was to force the people who had facilities for building tank steamers to build to the limit, and, if necessary, to expand rather than to force on to a shipbuilding plant that is not prepared for building tank steamers the task of changing their equipment and getting ready for it.

Mr. PIEZ. We are trying to do that, Senator.

The CHAIRMAN. Are you building any barges, Mr. Piez?

Mr. PIEZ. I am not certain as to that. I think a few. We have two barges being built for the Panama Canal.

The CHAIRMAN. You are taking up the matter of building barges so as to accommodate inland navigation—the canals—and that sort of thing by way of helping out the transportation problems?

Mr. PIEZ. There was an appropriation made. Admiral Bowles tells me that the latest information available at this time shows a surplus of barges, but a lack of towing capacity—tugboats.

Senator HARDING. Mr. Piez, you were speaking a moment ago about the housing matter. Was there ever any doubt on the part of the trustees of the Emergency Fleet Corporation about having money available for that enterprise?

Mr. PIEZ. Not in regard to the shipyards that we are erecting and which will be operated by our agents, but yes as regards building housing facilities for yards over which we had no ownership or in which we had no interest.

Senator HARDING. Then you spoke of your investigating trip. Did you find progress in the erection of steel ships interfered with by changes of plans and uncertain inspections?

Mr. PIEZ. There was some complaint of that kind. Of course complaint of that kind is always to be expected in some degree. In those yards that we visited, while there was some complaint, there was not an unusual degree of complaint of that kind. There was some complaint at the Cramps because we wanted very decided changes made in the case of two passenger ships, which were desired to be changed over to troop ships, and that was a very necessary change, and so that complaint was, in a measure, groundless.

Senator JOHNSON. Mr. Piez, the construction of wooden ships has been demonstrated to be both feasible and practicable, has it not?

Mr. PIEZ. I think so. I was opposed to them at first, Senator, but I have confidence in their ability to be of service.

Senator JOHNSON. And the fact that other ships have been taken from the coastwise trade renders the construction of wooden ships quite essential, does it not?

Mr. PIEZ. Absolutely essential, in my mind, to help out with our program.

The CHAIRMAN. I understand you have discontinued the construction of the composite ships.

Mr. PIEZ. Yes. Orders were placed for 58, and no orders have been placed for many months.

Mr. JONES. You have a great many proposals from yards on the Pacific coast for wooden shipbuilding, have you not?

Mr. PIEZ. Yes. We are adopting a very much more liberal policy and encouraging private owners to build ships of a smaller tonnage—of 2,500 tons and under.

Senator NELSON. Are they building any wooden ships up on the coast of Maine?

Mr. PIEZ. Yes.

Senator NELSON. They used to do a good deal of shipbuilding up there?

Mr. PIEZ. They formerly did do a good deal of shipbuilding there.

Senator JONES. How are you encouraging the building of wooden ships for private account?

Mr. PIEZ. We are relieving them of certain commandeering restrictions when they are built for American account, and we have not commandeered vessels under 2,500 tons.

Senator JONES. Do you propose to help them in the way of getting whatever steel is necessary?

Mr. PIEZ. Yes; wherever we can, because we feel that where private enterprise attempts to do that sort of thing it must be in pursuance of some need that the localities have developed.

Senator JONES. But you will make them more subordinate to your own needs?

Mr. PIEZ. Absolutely subordinate. We try to keep control of it in order to offer no interference at all with our main program. The announcement of the policy which we are about to issue is covered by this announcement here [indicating] if you want it made a part of the record.

Senator JONES. I just want to emphasize the conditions on the Pacific coast and the facilities there that they have for building ships that you want, and then instead of following the policy that would lead to the transportation across the country of material to go into ships when transportation facilities are so short that the ships ought to be built where the material is?

Mr. PIEZ. Yes.

Senator JONES. And I know that there are a number of yards out there that would like very much to do it, and some of them have been trying to get contracts for the building of wooden ships for some time.

Mr. PIEZ. Yes.

Senator JONES. And I hope that the board will act pretty promptly in those matters.

The CHAIRMAN. If there is no objection, this will go into the record.

(The document submitted by Mr. Piez is here printed in full as follows:)

ANNOUNCEMENT OF POLICY WITH REGARD TO THE CONSTRUCTION IN AMERICAN SHIPYARDS OF SHIPS FOR PRIVATE ACCOUNT.

1. There is no policy of the board which would prevent a free construction of tugs and barges for American owners in American shipyards. On the contrary, the board is ready to encourage such construction on the Atlantic or Pacific coast or on inland waters.

2. In view of the necessity of devoting all steel shipbuilding resources to the Government's war program, it is the policy of the board, for the present, not to encourage construction of steel ships for private account, whether American or foreign, except for the above-mentioned tugs and barges.

3. There is no policy of the board to discourage the construction of wooden ships for private account where such construction will not interfere with the Government program.

4. Preference in granting permission for construction of wooden ships will be given to American owners, but in cases where no American owners apply foreign owners who will agree to the restrictions imposed by the board may, if such construction is in other respects approved, secure permission therefor. Persons or corporations desiring to construct ships in American yards should apply to the board for permission, giving the details of the proposed construction. Blank forms of applications can be obtained by applying to Charles Piez, vice president of the Emergency Fleet Corporation.

The shipbuilding facilities of the country having been largely increased by the board in the past six months, it will be the policy of the board hereafter to devote itself to the expansion of these new yards and the old yards rather than to the creation of any further new yards.

Senator NELSON. I just want to make a statement before the admiral proceeds, to the members of the board, and it is this: We feel on the upper Mississippi the sad want of barges to carry coal up to relieve the coal situation. If we had a fleet of barges there they could haul coal from the mouth of the Ohio, from Illinois and Iowa mines up the Mississippi River to the Twin Cities and distribute it from there to relieve a good deal of the difficulty that exists now in railroad transportation, and I would like to call the attention of the committee to the importance of that matter. It may be considered fairly a war measure, because it will relieve our railroads to a large extent.

Mr. HURLEY. Senator, we have appropriated $1,360,000 to be expended in building barges for the northern Mississippi.

Senator NELSON. That is very good, but what they need in addition to that is tugs.

Mr. HURLEY. Twenty-four barges and four tugs.

The CHAIRMAN. I think that same situation could be greatly relieved if we had barges on from Buffalo to New York. They tell me they need something like 100 barges there. I do not know.

Senator NELSON. On the Erie Canal?

The CHAIRMAN. On the Erie Canal; yes.

Senator SHERMAN. Mr. Chairman, I tried to get permission from Congress and from the department a year and a half or two years ago to spend $5,000,000 by the State of Illinois, just to promote the barge service, and could not get it. I think some of the members will recall the failure of a proposed amendment to enable Illinois to connect the Great Lakes and their cities with the Mississippi and Gulf. This would have given a barge service of great magnitude.

The CHAIRMAN. Admiral Bowles is present, and we would be glad to hear from him.

Senator JONES. Before the admiral proceeds I want to ask Mr. Piez a question. Mr. Piez, have you had any responses to your efforts to induce shipyards to go into the building of smaller wooden ships for private use?

Mr. PIEZ. We have had some responses. In each case we sent out applications, and it is being acted on and permission granted, but I think in only one case that I remember of a 1,100-ton vessel was built. Nothing has been done recently. We are just announcing this as a policy. Private owners have been discouraged heretofore in the building of small vessels, and we thought it was advisable, therefore, to make the general announcement of policy.

Senator JONES. This policy has been determined upon lately?

Mr. PIEZ. Yes, sir.

The CHAIRMAN. Now, we will hear Admiral Bowles.

STATEMENT OF ADMIRAL FRANCIS T. BOWLES, MANAGER OF THE DIVISION OF STEEL-SHIP CONSTRUCTION, EMERGENCY FLEET CORPORATION.

The CHAIRMAN. Admiral Bowles, state your name, your present occupation, and your prior occupation before becoming connected with the Shipping Board.

Admiral BOWLES. My name is Francis Tiffany Bowles, manager of the division of the steel-ship construction, in the Emergency

Fleet Corporation. I am sorry to have to begin so far back, Senator, on my record, but I graduated from the Naval Academy as an engineer in 1879. I graduated from the Royal Naval College in England as a naval architect in 1882. I was appointed to assistant naval constructor in 1881. I was four years the secretary of the Naval Advisory Board which had charge of the building of the White Squadron, and for 15 years following that I was the head of the Department of Construction in the Navy Yards, and I was for three years Chief Constructor of the Navy, just prior to Admiral Capps. I resigned from the Navy in 1903, and was, for 11 or 12 years the head of the Fore River Shipbuilding Co., at Quincy, Mass. In 1914 I retired from that position and have been engaged in various manufacturing businesses.

Senator NELSON. When did you become connected with the Shipping Board or the Fleet Corporation?

Admiral BOWLES. I took up my duties with the Emergency Fleet Corporation on the 13th of August?

Senator NELSON. This last August?

Admiral BOWLES. Last August.

I came, Mr. Chairman, prepared to answer specifically the questions that you, in your resolution of December 20, asked the Shipping Board.

The CHAIRMAN. Suppose we take those up in order, now, Admiral, beginning with the first one.

Admiral BOWLES. The first one, which I will read with your permission?

The CHAIRMAN. Yes.

Admiral BOWLES (reading):

1. An itemized statement of all contracts which have been let by and through the board and the subsidiary shipbuilding corporation thereof for the construction of ships, both steel and wood, since the establishment and creation of the Shipping Board. Such statement should give the full name of each person, firm, or corporation with whom each contract has been made; when organized and how long in operation; the place and locality where the shipbuilding under each contract has been or is being carried on.

I now lay before you a statement entitled "Table showing details regarding each contract for ships or hulls executed to date, together with summary contracts."

I am unable to furnish that portion of your demand which states when each company was organized, but have marked with an asterisk those yards which were known to be operating on January 1, 1917, taken from the reports of the Department of Commerce. In summary this shows——

Senator JONES. Admiral, have you data in connection with the letting of your contracts that will show when the company or organization to which you have let the contract was organized and how long it has been operating?

Admiral BOWLES. No; not with reference to old yards.

Senator JONES. That applies to the old yards?

Admiral BOWLES. That applies to the old yards.

Senator JONES. But you have the data with reference to new yards?

Admiral BOWLES. We have it with reference to the new yards.

This summary shows that the contracts awarded are 146 in number, and they have been awarded to 36 yards, which were old, on January 1, and 74 new ones.

Senator NELSON. Does that table there indicate whether those new yards were in existence when the contracts were made with them for building ships?

Admiral BOWLES. It does not.

(The tables referred to are here printed in full, as follows:)

[Confidential.]

Alphabetical list of contractors.

WOOD VESSELS.

Company.	Office.	Works.
Alabama Dry Dock & Shipbuilding Co.	Mobile, Ala.	Mobile, Ala.
American Shipbuilding Co.	11 Broadway, New York City	Brunswick, Ga.
Beaumont Shipbuilding Co.	Beaumont, Tex	Beaumont, Tex.
Babare Bros	Tacoma, Wash.	Tacoma, Wash.
Benecia Shipbuilding Corporation	131 Leidesdorff Street, San Francisco, Cal.	Benecia, Cal.
Coast Shipbuilding Co	504 Concord Building, Portland, Oreg.	Portland, Oreg.
Cumberland Shipbuilding Co.	Portland, Me.	South Portland, Me.
Coos Bay Shipbuilding Co	Marshfield, Oreg.	Marshfield, Oreg.
Chandler, R. J	Los Angeles, Cal.	Wilmington, Los Angeles, Cal.
Dantzler Shipbuilding & Dry Dock Co.	Moss Point, Miss.	Moss Point, Miss.
Dierks-Blodgett Shipbuilding Co	Care of Dierks Lumber & Coal Co., Kansas City, Mo.	Pascagoula, Miss.
Feeney & Bremer Co	Tillamook, Oreg	Tillamook, Oreg.
Foundation Co	The Woolworth Building, New York City.	Passaic River, Newark, N. J.
Fulton Shipbuilding Co	Los Angeles, Cal.	Head Morman Channel, Wilmington, Cal.
Freeport Shipbuilding Co	Freeport, Me.	South Freeport, Me.
Grays Harbor M. S. Corporation	Aberdeen, Wash	Grays Harbor, Wash.
Graton Iron Works	50 Broad Street, New York City	Noank, Conn.
Grant Smith-Porter-Guthrie Co	Multinomah Hotel, Portland, Oreg	St. Johns, Oreg.
Gildersleeve Ship Construction Co	Gildersleeve, Conn	Gildersleeve, Conn.
Geo. A. Gilchrest	60 Maine Street, Thomaston, Me	Thomaston, Me.
Hillyer-Sperring-Dunn Co	Jacksonville, Fla	Jacksonville, Fla.
Hammond Lumber Co	San Francisco, Cal.	Humboldt Bay, Cal.
Hodge Ship Co	Moss Point, Miss	Moss Point, Miss.
Housatonic Shipbuilding Co. (Inc.)	Stratford, Conn.	Housatonic River, Stratford, Conn.
Heldenfels Bros	Beeville, Tex	Near Port Aransas, Tex.
Jahncke Navigation Co	New Orleans, La	Tchefunctu River, La.
Johnson Shipyards Corporation	2941 Richmond Ter., Mariners Harbor, Shooters Island, N. Y.	Mariners Harbor, New York City.
Kingston Shipbuilding Corporation	Kingston, N. Y	Rondout Creek, Kingston, N. Y.
Kruse & Banks Shipbuilding Co	North Bend, Oreg	North Bend, Oreg.
Kelly Spear Co	Bath, Me.	Bath, Me.
Lake & Ocean Navigation Co	R. 1124, 208 South La Salle, Chicago, Ill.	Sturgeon Bay, Wis.
Lone Star Shipbuilding Co	111 Broadway, New York	Beaumont, Tex.
Maryland Shipbuilding Co	Lexington Building, Baltimore, Md	Sollers Point, Md.
McBride & Law	Beaumont, Tex	Naches Riveer, Beaumont, Tex.
J. M. McCammon	Houston, Tex	Beaumont, Tex.
Murnan Shipbuilding Corporation	836 Commercial Trust Building, Philadelphia, Pa.	Pinto Island, Mobile, Ala.
J. M. Murdock	Jacksonville, Fla	Jacksonville, Fla.
Midland Bridge Co	Kansas City, Mo., 504-510 Midland Building; all mail to Houston, Tex.	Ship Channel, Houston, Tex.
Morey & Thomas	P. O. Box 619, Jacksonville, Fla	St. Johns River, Jacksonville, Fla.
Meacham & Babcock Shipbuilding Co	Seattle, Wash	Salmon Bay, Wash.
McEachern Ship Co	Portland, Oreg	Astoria, Oreg.
Newcomb Lifeboat Co	Hampton, Va	Hampton, Va.
National Shipbuilding Co	120 Broadway, New York City	Orange, Tex.
North Carolina Shipbuilding Co	Morehead City, N. C	Morehead City, N. C.
Nilson & Kelez Shipbuilding Corporation.	Seattle, Wash	Seattle, Wash.
Peninsula Shipbuilding Co	Portland, Oreg	Portland, Oreg.
Portland Ship Ceiling Co	130 Commercial Street, Portland, Me	Portland, Me.
Potomac Shipbuilding Co	Colorado Building, Washington, D. C.	Quantico, Va.
Rodgers, Geo. F., & Co	Astoria, Oreg	Astoria, Oreg.
G. M. Standifer Construction Corporation.	611 N. W. National Bank Building, Portland, Oreg.	Portland, Oreg.
Sloan Shipyard Corporation	Olympia, Wash	Seattle and Olympia, Wash.
Sanderson & Porter	52 William Street, New York City	Willapa Harbor, Wash.
Ship Constructing & Trading Co	50 Broadway, New York City	Stonington, Conn.
Henry Smith & Sons Co	7 East German Street, Baltimore, Md	Baltimore, Md.

Alphabetical list of contractors—Continued.

WOOD VESSELS—Continued.

Company.	Office.	Works.
Southern Dry Dock & Shipbuilding Co.	Orange, Tex.	Orange, Tex.
L. H. Shattuck (Inc.)	Manchester, N. H.	Piscataqua River. Portsmouth, N. H.
Sommarstrom Shipbuilding Co.	217 Front Street, San Francisco, Cal.	Columbia City, Oreg.
Seaborn Shipyards Co.	812 Leary Building, Seattle, Wash.	Tacoma, Wash.
St. Helens Shipbuilding Co.	900 Fife Building, San Francisco, Cal.	St. Helens, Oreg.
Sandy Point Shipbuilding Corporation.	Sandy Point, Me.	Sandy Point, Me.
Tacoma Shipbuilding Co.	Tacoma, Wash.	Tacoma, Wash.
Traylor Shipbuilding Corp.	Allentown, Pa. Cornwells Heights, Pa.	Cornwells Heights, Pa.
Tampa Dock Co.	Tampa, Fla.	Tampa, Fla.
Universal Shipbuilding Co.	515 Union National Bank Bld., Houston, Tex.	Houston Ship Canal, Harris City, Tex.
Union Bridge & Construction Co.	Morgan City, La.	Morgan City, La.
U. S. Maritime Corporation	502 Union Savings Bank Building, Washington, D. C.	Brunswick, Ga.
Wilson Shipbuilding Co.	Astoria, Oreg.	Astoria, Oreg.
Wrights Shipyards	Tacoma, Wash.	Tacoma, Wash.
York River Shipbuilding Corporation	West Point, Va.	West Point, Va.

STEEL VESSELS.

American International Corporation	140 North Broad Street, Philadelphia, Pa. (general correspondence).	Philadelphia, Pa. (Hog Island).
The American Shipbuilding Co.	Foot of West Fifty-fourth Street NW., Cleveland, Ohio.	Various Great Lakes ports.
Baltimore Dry Dock & Shipbuilding Co.	Baltimore, Md.	Baltimore, Md.
Bayles Shipyard (Inc.)	115 Broadway, New York City.	Port Jefferson, Long Island, N. Y.
California Shipbuilding Co.	Long Beach, Cal.	Long Beach, Cal.
Downey Shipbuilding Corporation	120 Broadway, New York.	Milliken, Richmond Borough, New York City.
Daniels, Oscar Co.	Woolworth Building, New York City.	Tampa, Fla.
Erickson Engineering Co. (Inc.)	New York, N. Y.; eighteenth floor, Hanover National Bank Building, Nassau and Pine Streets.	Seattle, Wash.
Federal Shipbuilding Co.	54 Dey Street, New York, N. Y.	Hackensack River N. J.
Groton Iron Works	50 Broad Street, New York.	Groton, Conn.
	Groton, Conn.	Alexandria, Va.
Hampton Roads Shipbuilding & Dry Dock Corporation.	Norfolk, Va.	Norfolk, Va.
Jahncke Shipbuilding Co. (Inc.)	814 Howard Avenue, New Orleans, La.	New Orleans, La.
Los Angeles Shipbuilding & Dry Dock Co.	Box C, San Pedro, Cal. Los Angeles, Cal.	Los Angeles Harbor, Cal.
Merrill-Stevens Co.	Jacksonville, Fla.	Jacksonville, Fla.
Moore & Scott Iron Works	San Francisco, Cal.	Oakland, Cal.
Merchant Shipbuilding Corporation	165 Broadway, New York City. (Correspondence: Finance Building, Philadelphia, Pa.)	Bristol, Pa.
Newburgh Shipyards (Inc.)	Newburgh, N. Y.	Newburgh, N. Y.
Patterson-McDonald Shipbuilding Co.	Seattle, Wash.	Seattle, Wash.
Pacific Coast Shipbuilding Co.	First National Bank Building, San Francisco, Cal.	Suisun Bay, San Francisco, Cal.
Pensacola Shipbuilding Co.	155 North Clarke Street, Chicago, Ill.	Pensacola, Fla.
Skinner & Eddy Corporation	Smith Building, Seattle, Wash.	Seattle, Wash.
Seattle Construction & Dry Dock Co.	Seattle, Wash.	Do.
Southern Shipbuilding Corporation	Charleston, S. C.	Charleston, S. C.
Sun Shipbuilding Co.	1428 South Penn Square Philadelphia, Pa.	Chester, Pa.
Saginaw Shipbuilding Co.	Saginaw, Mich.	Saginaw, Mich.
Submarine Boat Corporation	5 Nassau Street, New York, N. Y.	Newark, N. J.
Western Pipe & Steel Co. of California	San Francisco, Cal.	South San Francisco, Cal.

COMPOSITE VESSELS.

Mobile Shipbuilding Co.	Mobile, Ala.	Mobile, Ala.
Merrill-Stevens Co.	Jacksonville, Fla.	Jacksonville, Fla.
Supple & Ballin	Portland, Oreg.	Portland, Oreg.
Terry Shipbuilding Corporation	Savings Bank & Trust Co., Savannah, Ga.	Port Wentworth Terminal, Savannah, Ga.

Executed contracts—Memorandum showing number of ships, total tonnage, total cost, and cost per dead-weight ton of complete ships or hulls.

(As of Dec. 17, 1917.)

COMPOSITE (COMPLETE).

No.	Contract company.	Number of ships.	Total tons.	Total cost.	Cost per dead-weight ton.
[1] 1	Merrill Stevens Co.	12	42,000	$5,712,000	$136.00
[1] 9	Terry Shipbuilding Corporation	20	70,000	9,520,000	136.00
31	Supple & Ballin	8	32,000	4,400,000	137.50
44	Mobile Shipbuilding Co	18	63,000	8,100,000	128.57
	Total	58	207,000	27,732,000	133.97

STEEL (COMPLETE SHIP).

No.	Contract company.	Number of ships.	Total tons.	Total cost.	Cost per dead-weight ton.
[1] 2	Merrill Stevens Co.	4	24,000	$3,864,000	$161.00
[1] 4	Los Angeles Shipbuilding & Dry Dock Co.	8	70,400	10,883,840	154.60
10	Skinner & Eddy Corporation	6	52,800	8,400,000	159.09
[1] 13	Seattle Construction & Dry Dock Co.	10	75,000	13,125,000	175.00
[1] 18	Moore & Scott Iron Works	10	94,000	15,022,516	159.81
[1] 26	Baltimore Dry Dock & Shipbuilding Co.	8	70,400	11,123,200	158.00
[1] 30	Downey Shipbuilding Co.	10	75,000	11,625,000	155.00
[1] 33	Sun Shipbuilding Co.	4	40,000	5,684,000	142.10
48	Western Pipe & Steel Co. of Cal.	8	70,400	10,824,000	153.75
[1] 57	Groton Iron Works	6	52,800	8,184,000	155.00
61	Saginaw Shipbuilding Co.	6	21,000	3,360,000	160.00
63	California Shipbuilding Co.	3	18,000	2,725,320	151.41
[2] 83	American International Corporation	50	[3] 375,000	57,750,000	154.00
[2] 83	American International Corporation (option exercised)	70	[3] 560,000	115,500,000	206.25
[2] 86	Submarine Boat Corporation	50	[3] 250,000	39,375,000	157.50
[2] 86	Submarine Boat Corporation (option exercised)	100	[3] 500,000	75,600,000	151.20
[2] 87	Merchant Shipbuilding Corporation	40	[3] 360,000	54,776,320	152.15
91	Newburgh Shipyard (Inc.)	4	36,000	6,177,600	171.60
92	Los Angeles Shipbuilding & Dry Dock Co.	10	88,000	15,136,000	172.00
93	Jahncke Shipbuilding Co. (Inc.)	6	30,000	4,950,000	165.00
94	Hampton Roads Shipbuilding & Corporation Dry Dock	4	29,200	4,818,000	164.68
95	Federal Shipbuilding Co.	10	96,000	15,500,000	161.46
97	Oscar Daniels Co.	10	95,000	15,390,000	162.00
98	Erickson Engineering Co. (Inc.)	10	94,000	15,980,000	170.00
99	Bayles Shipyard (Inc.)	4	20,000	3,300,000	165.00
100	Patterson-McDonald Shipbuilding Co.	8	70,000	11,968,000	170.00
101, 106	American Shipbuilding Co.	6	21,300	4,235,250	198.84
107, 140	do	34	120,700	24,820,000	205.63
141	Southern Shipbuilding Corporation	16	120,000	19,440,000	162.00
142	Pacific Coast Shipbuilding Co.	10	94,000	15,792,000	168.00
144	Pensacola Shipbuilding Co.	10	90,000	14,580,000	162.00
145	Groton Iron Works	12	112,800	18,048,000	160.00
146	The Atlantic Corporation	10	88,000	14,080,000	160.00
	Total	557	3,914,200	651,627,046	166.48
42	Alabama Dry Dock & Shipbuilding Co. (barges)	2	[4] 15,000	1,091,302	72.75

WOOD (COMPLETE SHIP).

No.	Contract company.	Number of ships.	Total tons.	Total cost.	Cost per dead-weight ton.
3	G. M. Standifer Corporation	10	35,000	$5,000,000	$142.86
[2] 5	Peninsula Shipbuilding Co.	4	16,000	2,000,000	125.00
6	Sloan Shipyard Corporation	16	56,000	7,840,000	140.00
[2] 23	Traylor Shipbuilding Corp	10	35,000	5,000,000	142.86
25	Lake & Ocean Navigation Co.	1	3,500	450,000	128.57
32	National Shipbuilding Co.	12	56,400	7,560,000	134.04
[2] 40	Grant Smith-Porter-Guthrie Co.	8	28,000	4,000,000	142.85
143	Meacham & Babcock Shipbuilding Co.	4	14,000	2,220,000	158.57
	Total	65	243,900	34,070,000	139.69

[1] Contracts let on the cost per D. W. ton basis.
[2] Contracts let on the cost plus basis.
[3] Consideration should be given the corporation's obligation to bear the expense of the construction of plant, ways, etc.
[4] Consideration should be given the cost of steel which the corporation under the agreement is to furnish.

Executed contracts—Memorandum showing number of ships, total tonnage, total cost, and cost per dead-weight ton of complete ships or hulls—Continued.

WOOD (COMPLETE SHIP) (Emergency Fleet Corporation obligated to furnish machinery).

No.	Contract company.	Number of ships.	Total tons.	Total cost.	Cost per dead-weight ton.
22	Newcomb Lifeboat Co	4	14,000	$1,470,332	$105.02
[1] 34	Grant Smith-Porter-Guthrie Co	12	42,000	3,600,000	85.71
	Total	16	56,000	5,070,332	90.54

WOOD HULLS.

7	Grays Harbor M. S. Corporation	4	16,000	$1,260,000	$78.75
8	Coast Shipbuilding Co	4	14,000	1,200,000	85.71
[1] 11	Sanderson & Porter	10	35,000	3,000,000	85.71
[1] 12	Maryland Shipbuilding Co	6	21,000	2,100,000	100.00
[1] 14	Foundation Co	10	[2] 35,000	3,000,000	85.71
15	Groton Iron Works	12	42,000	3,600,000	85.71
16	Ship Construction & Trading Co	2	7,000	600,000	85.71
17	Hillyer-Sperring-Dunn Co	4	14,000	1,200,000	85.71
19	Portland Ship Ceiling Co	4	14,000	1,200,000	85.71
20	Universal Shipbuilding Co	12	42,000	3,600,000	85.71
21	McBride & Law	4	14,000	1,200,000	85.71
24	American Shipbuilding Co	4	[3] 14,000	1,200,000	85.71
27	Tampa Dock Co	4	[4] 14,000	1,200,000	85.71
[1] 28	Union Bridge & Construction Co	6	21,000	1,800,000	85.71
[1] 29	Jahncke Shipbuilding Co. (Inc.)	6	21,000	1,800,000	85.71
35	Gildersleeve Ship Construction Co	2	7,000	600,000	85.71
36	Lone Star Shipbuilding Co	8	28,000	2,400,000	85.71
37	Kingston Shipbuilding Co	4	14,000	1,200,000	85.71
38	Johnson Shipyard Corporation	3	10,500	900,000	85.71
39	Dierks Blodgett Shipbuilding Co	6	21,000	1,740,000	82.86
41	Henry Smith & Sons Co	8	28,000	2,400,000	85.71
[1] 43	Potomac Shipbuilding Co	7	24,500	2,100,000	85.71
45	J. N. McCammon	2	7,000	600,000	85.71
46	Hammond Lumber Co	2	7,000	580,000	82.86
[1] 47	Alabama Dry Dock & Shipbuilding Co	2	7,000	600,000	85.71
49	Murman Shipbuilding Corporation	4	14,000	1,140,000	81.43
50	Geo. A. Gilchrest	1	3,500	300,000	85.71
51	Hodge Ship Co. (Inc.)	4	14,000	1,200,000	85.71
52	Southern Dry Dock & Shipbuilding Co	5	17,500	1,500,000	85.71
[1] 53	J. M. Murdock	2	7,000	600,000	85.71
[1] 54	Midland Bridge Co	6	21,000	1,800,000	85.71
55	U. S. Maritime Corporation	6	21,000	1,800,000	85.71
56	North Carolina Shipbuilding Co	2	7,000	600,000	85.71
58	Morey & Thomas	4	14,000	1,200,000	85.71
59	Cumberland Shipbuilding Co	9	31,500	2,700,000	85.71
[1] 60	L. H. Shattuck (Inc.)	18	[5] 63,000	5,220,000	82.86
62	York River Shipbuilding Corporation	8	28,000	2,396,000	85.57
64	Kruse & Banks Shipbuilding Co	6	21,000	1,740,000	82.86
65	Fulton Shipbuilding Co	4	14,000	1,150,000	82.14
66	Freeport Shipbuilding Co	1	3,500	300,000	85.71
67	Sommarstrom Shipbuilding Co	4	14,000	1,120,000	80.00
68	Kelley Spear Co	1	3,500	300,000	85.71
69	Meacham & Babcock Shipbuilding Co	2	7,000	580,000	82.86
70	Wilson Shipbuilding Co	3	10,500	900,000	85.71
71	Beaumont Shipbuilding Co	4	14,000	1,200,000	85.71
72	Coos Bay Shipbuilding Co	4	14,000	1,120,000	80.00
[1] 73	Housatonic Shipbuilding Co	10	[6] 35,000	2,775,000	79.29
74	Nilson & Kelez Shipbuilding Corporation	4	14,000	1,200,000	85.71
75	Geo. F. Rodgers & Co	4	14,000	1,200,000	85.71
76	Seaborn Shipyards Co	8	28,000	2,400,000	85.71
77	St. Helens Shipbuilding Co	2	7,000	600,000	85.71
78	Babare Bros	1	3,500	290,000	82.86
79	Ralph J. Chandler	2	7,000	580,000	82.86
80	Sandy Point Shipbuilding Co	2	7,000	600,000	85.71
81	Benecia Shipbuilding Co	2	7,000	600,000	85.71
82	Wright Shipyards	2	7,000	600,000	85.71
84	Feeney & Bremer Co	1	3,500	300,000	85.71
85	Tacoma Shipbuilding Co	4	14,000	1,200,000	85.71

[1] Contracts let on the cost plus basis.
[2] $364,500 for the construction of ways, etc., has not been included in this figure.
[3] $32,000 for the construction of ways, etc., has not been included in this figure.
[4] $28,000 for the construction of ways, etc., has not been included in this figure.
[5] $360,000 for the construction of ways, etc., plant, railway approaches, has not been included in this figure.
[6] $225,000 for plant improvements and extensions.

***Executed contracts—Memorandum showing number of ships, total tonnage, total cost, and cost per dead-weight ton of complete ships or hulls*—Continued.**

WOOD HULLS—Continued.

No.	Contract company.	Number of ships.	Total tons.	Total cost.	Cost per dead-weight ton.
88	Dantzler Shipbuilding & Dry Dock Co	6	21,000	$1,800,000	$85.71
89	Heldenfels Bros	4	14,000	1,200,000	85.71
90	Hammond Lumber Co	2	7,000	600,000	85.71
96	McEachern Ship Co	10	35,000	2,800,000	80.00
	Total	298	1,045,000	88,691,000	84.87
	Grand total	994	5,466,100	807,600,378	.....
	Alabama Dry Dock & Shipbuilding Co. (not included in totals)	2	15,000	1,091,302	72.75
	Allowing that it will cost approximately $200,000 to complete the hulls, the following is an estimated grand total to cover contracted vessels complete:				
	Estimated grand total	994	5,466,100	870,080,378	159.18

Table showing details regarding each contract for ships or

[*Yards which are shown as operating

Contract No.	Date.	Type of construction.	Hull or complete ship.	Company.	Location of works.	Office address.	Number assigned to ship or hull.
*1	Apr. 29	C....	C....	Merrill & Stevens Co.	Jacksonville, Fla..	Jacksonville, Fla..	1-12
2	May 1	S....	C....	....do.....	....do.....	....do.....	13-16
3	May 14	W...	C....	G. M. Standifer C. Corp.	Portland, Oreg....	611 NW. National Bank Building, Portland, Oreg.	17-26
4	May 13	S....	C....	Los Angeles S. B. & D. D. Co.	Los Angeles Harbor, Cal.	Post-office box C, San Pedro, Cal.	27.34
*5	May 15	W...	C....	Peninsula S. B. Co.	Portland, Oreg....	Portland, Oreg....	35-38
6	May 18	W...	C....	Sloan Shipyards Corp.	Seattle, Wash.....	Coleman Building, Seattle, Wash.	39-54
7	May 19	W...	H...	Grays Harbor M. S. Corp.	Aberdeen, Wash..	Aberdeen, Wash..	55-58
*8	May 21	W...	H...	Coast Shipbuilding Co.	Portland, Oreg....	504 Concord Building, Portland, Oreg.	59-62
9	May 24	C....	C....	Terry S. B. Co....	Savannah, Ga.....	Savannah Bank & Trust Co., Savannah, Ga.	63-82
*10	May 28	S....	C....	Skinner & Eddy Corp.	Seattle, Wash.....	Smith Building, Seattle, Wash.	83-88
11	June 4	W..	H...	Sanderson & Porter.	Willapa Harbor, Wash.	52 William Street, New York City.	89-98
12	...do.....	W...	H...	Maryland S. B. Co.	Baltimore, Md....	Lexington Building, Baltimore, Md.	99-104
*13	June 5	S....	C...	Seattle Constn. & D. D. Co.	Seattle, Wash.....	Seattle, Wash.....	105-114
14	June 13	W...	H...	Foundation Co....	Newark, N. J.....	Woolworth Building, New York City.	115-124
*15	June 15	W...	H...	Groton Iron Works	Noank, Conn.....	50 Broad Street, York City.	125-126
16	...do.....	W...	H...	Ship Constn. & Trading Co.	Stonington, Conn.	50 Broadway, New York City.	127-138
*17	June 19	W...	H...	Hillyer-Sperring-Dunn Co.	Jacksonville, Fla..	Jacksonville, Fla..	139-142
*18	...do.....	S....	C....	Moore & Scott Iron Works.	Oakland, Cal.....	San Francisco, Cal	143-152
19	June 23	W...	H...	Portland Ship Ceiling Co.	Portland, Me.....	130 Commercial Street, Portland, Me.	153-156
20	...do.....	W...	H...	Universal Shipbldg. Co.	Houston Ship Canal Harris Company, Tex.	25 Broadway, New York City.	157-168
21	...do.....	W...	H...	McBride & Law...	Beaumont, Tex...	Beaumont, Tex...	169-172
22	...do.....	W...	C....	Newcomb Lifeboat Co.	Hampton, Va.....	Hampton, Va.....	173-176
23	June 16	W...	C....	Traylor, S. B. Corp.	Cornwells Heights, Pa.	Allentown, Pa....	177-186
24	June 26	W...	H...	American S. B. Co.	Brunswick, Ga....	11 Broadway, New York City.	187-190
*25	June 28	W...	C....	Lake & Ocean Nav. Co.	Sturgeon Bay, Wis.	Route 1124, 208 South LaSalle Street, Chicago, Ill.	191
*26	June 30	S....	C....	Baltimore D. D. & S. B. Co.	Baltimore, Md....	Baltimore, Md....	192-199
27	...do.....	W...	H...	Tampa Dock Co..	Tampa, Fla.....	Tampa, Fla.....	200-203
28	June 16	W...	H...	Union Bridge & Constn. Co.	Morgan City, La..	903 Sharp Building, Kansas City, Mo.	204-209
29	July 3	W...	H...	Jahnoke S. B. Co..	Chefuncte River, La.	New Orleans, La..	210-215
30	...do.....	S....	C....	Downey S. B. Corp.	Milliken, Richmond Borough, New York City.	New York City...	216-225

[1] Includes $364,500 for ways. [2] Includes $32,000 for ways.

hulls executed to date, together with summary for all contracts.

Jan. 1, 1917.—Commerce Department Report, 1916.]

Number of ships or hulls.				Tonnage of ships or hulls.				Total cost of ships or hulls.			
Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.
12			12	42,000			42,000	$5,712,000			$5,712,000
16		4		66,000		24,000		9,576,000		$3,864,000	
26	10			101,000	35,000			14,576,000	$5,000,000		
34		8		171,400		70,400		25,459,840		10,883,840	
38	4			187,400	16,000			27,459,840	2,000,000		
54	16			243,400	56,000			35,299,840	7,840,000		
58	4			259,400	16,000			36,559,840	1,260,000		
62	4			273,400	14,000			37,759,840	1,200,000		
82			20	343,400			70,000	47,279,840			9,520,000
88		6		396,200		52,800		55,679,840		8,400,000	
98	10			431,200	35,000			58,679,840	3,000,000		
104	6			452,200	21,000			60,779,840	2,100,000		
114		10		527,200		75,000		73,904,840		13,125,000	
124	10			562,200	35,000			77,269,340	[1] 3,364,500		
136	12			604,200	42,000			80,869,340	3,600,000		
138	2			611,200	7,000			81,469,340	600,000		
142	4			625,200	14,000			82,669,340	1,200,000		
152		10		719,200		94,000		97,691,856		15,022,516	
156	4			733,200	14,000			98,891,856	1,200,000		
168	12			775,200	42,000			102,491,856	3,600,000		
172	4			789,200	14,000			103,691,856	1,200,000		
176	4			803,200	14,000			105,162,188	1,470,332		
186	10			838,200	35,000			110,162,188	5,000,000		
190	4			852,200	14,000			111,394,188	[2] 1,232,000		
191	1			855,700	3,500			111,844,188	450,000		
199		8		926,100		70,400		122,967,388		11,123,200	
203	4			940,100	14,000			124,195,388	[2] 1,228,000		
209	6			961,100	21,000			125,995,388	1,800,000		
215	6			982,100	21,000			127,795,388	1,800,000		
225		10		1,057,100		75,000		139,420,388		11,625,000	

[2] Includes $28,000 for ways.

Table showing details regarding each contract for ships or hulls

Contract No.	Date.	Type of construction.	Hull or complete ship.	Company.	Location of works.	Office address.	Number assigned to ship or hull.
*31	July 9	C....	C....	Supple & Ballin...	Portland, Oreg....	Portland, Oreg....	226-233
32	July 11	W...	C....	National S. B. Co..	Orange, Tex.....	120 Broadway, New York City.	234-245
*33	June 9	S....	C....	Sun Shipbuilding Co.	Chester, Pa.....	Chester, Pa.....	246-249
34	June 25	W...	C....	Grant-Smith-Porter-Guthrie Co.	St. Johns, Oreg....	Multnomah, Hotel, Portland, Oreg.	250-261
*35	July 12	W...	H...	Gildersleeve Ship Constn. Co.	Gildersleeve, Conn.	Gildersleeve, Conn.	262-263
36	...do....	W...	H...	Lone Star S. B. Co.	Beaumont, Tex...	111 Broadway, New York City.	264-271
*37	July 14	W...	H...	Kingston S. B. Co.	Rondout Creek, Kingston, N. Y.	Kingston, N. Y...	272-275
38	...do.....	W...	H...	Johnson Shipyards Corp.	Mariners Harbor, New York City.	New York City....	276-278
39	...do.....	W...	H...	Dierks Blodgett S. B. Co.	Pascagoula, Miss.	Care of Dierks Lumber & Coal Co., Kansas City, Mo.	279-284
40	...do.....	W...	C....	Grant-Smith-Porter-Guthrie Co.	Aberdeen, Wash..	Multnomah Hotel, Portland, Oreg.	285-292
41	July 17	W...	H...	Henry Smith & Sons Co.	Baltimore, Md....	7 E. German St., Baltimore, Md.	293-300
42	July 20	(2)	C....	Alabama D. D. & S. B. Co.	Mobile, Ala.....	Mobile, Ala.....	301-302
43	...do.....	W...	H...	Potomac S. B. Co..	Quantico, Va.....	Colorado Building, Washington, D. C.	303-309
44	...do.....	C....	C....	Kelly-Atkinson Constn. Co.	Mobile, Ala.....	Security Building, Chicago, Ill.	310-327
45	July 21	W..	H...	J. M. McCommon.	Ship Channel Houston, Tex.	Houston, Tex.....	328-329
*46	...do....	W...	H...	Hammond Lumber Co.	Humboldt Bay, Cal.	San Francisco, Cal.	330-331
*47	...do....	W...	H...	Alabama D. D. & S. B. Co.	Mobile, Ala.....	Mobile, Ala.....	332-333
48	...do....	S....	C...	Western Pipe & Steel Co.	South San Francisco, Cal.	San Francisco, Cal.	334-341
*49	...do....	W...	H...	Murnan S. B. Corp.	Pinto Island, Mobile, Ala.	836 Commercial Trust Building, Philadelphia, Pa.	342-345
*50	...do....	W...	H...	Geo. A. Gilchrest..	Thomaston, Me..	60 Main Street, Thomaston, Me.	346
51	...do....	W...	H...	Hodge Ship Co. (Inc.).	Moss Point, Miss..	Moss Point, Miss..	347-350
52	...do....	W...	H...	Southern D. D. & S. B. Co.	Orange, Tex.....	Orange, Tex.....	351-355
53	July 23	W...	H...	J. M. Murdock....	Jacksonville, Fla..	Jacksonville, Fla..	356-357
54	July 20	W...	H...	Midland Bridge Co.	Ship Channel, Houston, Tex.	Kansas City, Mo..	358-363
55	Aug. 11	W...	H...	U. S. Maritime Corp.	Brunswick, Ga....	502 Union Savings Bank Building, Washington, D.C.	364-369
56	...do....	W...	H...	North Carolina, B. B. Co.	Morehead City, N. C.	Morehead City, N. C.	370-371
57	...do....	S...	C...	Groton Iron Works	Groton, Conn. ...	50 Broad Street, New York City.	372-377
58	Aug. 15	W...	H...	Morey & Thomas..	St. Johns River, Jacksonville, Fla.	1212 Chemical Building, St. Louis, Mo.	378-381
59	Aug. 16	W...	H...	Cumberland S. B. Co.	South Portland, Me.	Portland, Me.....	382-390
60	July 26	W...	H...	L. H. Shattuck, (Inc.).	Piscotaqua River, Portsmouth, N. H.	Manchester, N. H.	391-408
61	Aug. 20	S....	C...	Saginaw S. B. Co..	Saginaw, Mich....	Saginaw, Mich....	409-414

[1] This amount does not include the cost of steel which the corporation is to furnish.
[2] Steam Barge.

executed to date, together with summary for all contracts—Continued.

Number of ships or hulls.				Tonnage of ships or hulls.				Total cost of ships or hulls.			
Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.
233			8	1,089,100			32,000	$143,820,388			4,400,000
245	12			1,145,500	56,400			151,380,388	$7,560,000		
249		4		1,185,500		40,000		157,064,388		$5,684,000	
261	12			1,227,500	42,000			160,664,388	3,600,000		
263	2			1,234,500	7,000			161,264,388	600,000		
271	8			1,262,500	28,000			163,644,388	2,400,000		
275	4			1,276,500	14,000			164,864,288	1,200,000		
278	3			1,287,000	10,500			165,764,388	900,000		
284	6			1,308,000	21,000			167,504,388	1,740,000		
292	8			1,336,000	28,000			171,504,388	4,000,000		
300	8			1,364,000	28,000			173,904,388	2,400,000		
302		2		1,379,000		15,000		174,995,690		[1] 1,091,302	
309	7			1,403,500	24,500			177,095,690	2,100,000		
327			18	1,466,500			63,000	185,195,690			8,100,000
329	2			1,473,500	7,000			185,795,690	600,000		
331	2			1,480,500	7,000			186,375,690	580,000		
333	2			1,487,500	7,000			186,975,690	600,000		
341		8		1,557,900		70,400		197,799,690		10,824,000	
345	4			1,571,900	14,000			198,939,690	1,140,000		
346	1			1,575,400	3,500			199,239,690	300,000		
350	4			1,589,400	14,000			200,439,690	1,200,000		
355	5			1,606,900	17,500			201,939,690	1,500,000		
357	2			1,613,900	7,000			202,539,690	600,000		
363	6			1,634,900	21,000			204,339,690	1,800,000		
369	6			1,655,900	21,000			206,139,690	1,800,000		
371	2			1,662,900	7,000			206,739,690	600,000		
377		6		1,715,700		52,800		214,923,690		8,184,000	
381	4			1,729,700	14,000			216,123,690	1,200,000		
390	9			1,761,200	31,500			218,823,690	2,700,000		
403	18			1,824,200	63,000			224,403,690	[2] 5,580,000		
414		6		1,845,200		21,000		227,763,690		3,360,000	

[2] This item includes $360,000 for yards, railway approaches, plant, equipment, etc.

Table showing details regarding each contract for ships or hulls

Contract No.	Date.	Type of construction.	Hull or complete ship.	Company.	Location of works.	Office address.	Number assigned to ship or hull.
62	Aug. 20	W..	H...	York River S. B. Corp.	West Point, Va...	West Point, Va...	415–422
*63	...do....	S....	C...	California S. B. Co.	Long Beach, Cal..	Long Beach, Cal..	423–425
*64	Aug. 25	W..	H...	Kruse & Banks S. S. Co.	North Bend, Oreg.	North Bend, Oreg.	426–431
*65	July 23	W...	H...	Fulton S. B. Co...	Head Morman Channel, Wilmington, Cal.	Los Angeles, Cal..	432–435
66	Aug. 16	W...	H...	Freeport S. B. Co.	South Freeport, Me.	Freeport, Me.....	436
67	...do....	W...	H...	Scswurstrom S. B. Co.	Columbia City, Oreg.	San Francisco, Cal.	437–440
*68	...do....	W...	H...	Kelley Spear Co...	Bath, Me.....	Bath, Me.....	441
69	Aug. 7	W...	H...	Meacham & Babcock S. B. Co.	Salmon Bay, Wash.	Seattle, Wash.....	442–443
*70	Aug. 16	W...	H...	Wilson S. B. Co...	Astoria, Oreg.....	Astoria, Oreg.....	444–446
71	July 17	W...	H...	Beaumont S. B. Co.	Beaumont, Tex...	Beaumont, Tex...	447–450
72	Sept. 6	W...	H...	Coos Bay S. B. Co.	Marshfield, Oreg..	Marshfield, Oreg..	451–454
73	Sept. 7	W...	H...	Housatonic S. B. Co. (Inc.).	Housatonic River, Stratford, Conn.	Stratford, Conn...	455–464
74	Aug. 31	W...	H...	Nilson & Keles S. B. Corp.	Seattle, Wash.....	Seattle, Wash.....	465–468
75	Sept. 1	W...	H...	Geo. F. Rodgers & Co.	Astoria, Oreg.....	Astoria, Oreg.....	469–472
*76	Aug. 7	W...	H...	Seaborn Shipyards	Tacoma, Wash....	812 Leary Build- Seattle, Wash.	473–480
*77	July 14	W...	H...	St. Helens S. B. Co.	St. Helens, Oreg..	900 Fife Building, San Francisco, Cal.	481–482
*78	Aug. 14	W...	H...	Babare Brothers..	Tacoma, Wash....	Tacoma, Wash....	483
79	Aug. 24	W...	H...	Ralph J. Chandler.	Wilmington, Los Angeles.	Los Angeles, Cal..	484–485
80	Aug. 2	W...	H...	Sandy Point S. B. Corp.	Sandy Point, Me..	Sandy Point, Me..	486–487
*81	Aug. 31	W...	H...	Benicia S. B. Corp.	Benicia, Cal.....	Mercantile National Bank Building, San Francisco, Cal.	488–489
82	Aug. 2	W...	H...	Wright Shipyards.	Tacoma, Wash....	Tacoma, Wash....	490–491
83	Sept. 13	S....	C....	American Inter. Corp.	Hog Island, near Philadelphia, Pa.	120 Broadway, New York City.	492–541
84	Sept. 8	W...	H...	Feeny & Bemer Co.	Tillamook, Oreg...	Tillamook, Oreg...	542
85	Sept. 20	W...	H...	Tacoma S. B. Co..	Tacoma, Wash....	Tacoma, Wash....	543–546
86	Sept. 14	S....	C....	Submarine Boat Corp.	Newark, N. J.....	5 Nassau Street, New York City.	547–596
87	Sept. 7	S...	C....	Merchant S. B. Corp.	Bristol, Pa.....	165 Broadway, New York City.	597–636
88	Sept. 7	W..	H...	Dantzler S. B. & D. D. Co.	Moss Point, Miss..	Moss Point, Miss..	637–642
89	Sept. 13	W..	H...	Heldenfels Bros...	Near Port Aransas, Tex.	Beeville, Tex.....	643–646
*90	...do....	W..	H...	Hammond Lumber Co.	Eureka, Humbolt Bay, Cal.	San Francisco, Cal	647–648
91	Oct. 29	S....	C....	Newburgh Shipyards (Inc.).	Newburgh, N. Y..	Newburgh, N. Y..	759–762
92	Oct. 18	S....	C....	Los Angeles S. B & D. D. Co.	Los Angeles Harbor, Cal.	Los Angeles, Cal..	763–772
93	...do....	S....	C....	Jahncke S. B. Co. (Inc.).	New Orleans, La..	New Orleans, La..	653–658
94	Oct. 20	S....	C....	Hampton Roads S. B. & D. D. Corp.	Norfolk, Va.....	Norfolk, Va.....	649–652
95	Oct. 15	S....	C....	Federal Shipbuilding Co.	Hackensack River, N. J.	54 Dey Street, New York City.	955–964
*96	Sept. 6	W..	H...	McEachern Ship Co.	Astoria, Oreg.....	Portland, Oreg....	659–668

[1] This item includes $225,000 for improvements and extension to plant.

executed to date, together with summary for all contracts—Continued.

Number of ships or hulls.				Tonnage of ships or hulls.				Total cost of ships or hulls.			
Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.
422	8			1,873,200	28,000			$230,159,690	$2,396,000		
425		3		1,891,200		18,000		232,885,010		$2,725,320	
431	6			1,912,200	21,000			234,625,010	1,740,000		
435	4			1,926,200	14,000			235,775,010	1,150,000		
436	1			1,929,700	3,500			236,075,010	300,000		
440	4			1,943,700	14,000			237,195,010	1,120,000		
441	1			1,947,200	3,500			237,495,010	300,000		
443	2			1,954,200	7,000			238,075,010	580,000		
446	3			1,964,700	10,500			238,975,010	900,000		
450	4			1,978,700	14,000			240,175,010	1,200,000		
454	4			1,992,700	14,000			241,295,010	1,120,000		
464	10			2,027,700	35,000			244,295,010	[1] 3,000,000		
468	4			2,041,700	14,000			245,495,010	1,200,000		
472	4			2,055,700	14,000			246,695,010	1,200,000		
480	8			2,083,700	28,000			249,095,010	2,400,000		
482	2			2,090,700	7,000			249,695,010	600,000		
483	1			2,094,200	3,500			249,985,010	290,000		
485	2			2,101,200	7,000			250,565,010	580,000		
487	2			2,108,200	7,000			251,165,010	600,000		
489	2			2,115,200	7,000			251,765,010	600,000		
491	2			2,122,200	7,000			252,365,010	600,000		
541		50		2,497,200		375,000		310,115,010		[2] 57,750,000	
542	1			2,500,700	3,500			310,415,010	300,000		
546	4			2,514,700	14,000			311,615,010	1,200,000		
596		50		2,764,700		250,000		350,990,010		[2] 39,375,000	
636		40		3,124,700		360,000		405,766,330		[2] 54,776,320	
642	6			3,145,700	21,000			407,566,330	1,800,000		
646	4			3,159,700	14,000			408,766,330	1,200,000		
648	2			3,166,700	7,000			409,366,330	600,000		
652		4		3,202,700		36,000		415,543,930		6,177,600	
662		10		3,290,700		88,000		430,679,930		15,136,000	
668		6		3,320,700		30,000		436,629,930		4,950,000	
672		4		3,349,900		29,200		440,447,930		4,818,000	
682		10		3,445,900		96,000		455,947,930		15,500,000	
692	10			3,480,900	35,000			458,747,930	2,800,000		

[1] This item does not include the cost of the erection of plant, ways, etc., the expense of which is to be borne by the owner.

Table showing details regarding each contract for ships or hulls

Contract No.	Date.	Type of construction.	Hull or complete ship.	Company.	Location of works.	Office address.	Number assigned to ship or hull.
83	Oct. 23	S....	C....	American Inter. Corp. (option exercised).	Hog Island, near Philadelphia, Pa.	180 Broadway, New York City.	669–738
97	Oct. 30	S....	C....	Oscar Daniels Co..	Brunswick, Ga....	Woolworth building, New York City.	739–748
98	Nov. 5	S....	C....	Erickson Engr. Co. (Inc.).	Seattle, Wash.....	Hanover Building, New York City.	749–758
99	Nov. 8	S....	C....	Bayles Shipyard (Inc.).	Port Jefferson, L. I., N. Y.	115 Broadway, New York City.	773–776
100	Nov. 7	S....	C....	Patterson - McDonald S. B. Co.	Seattle, Wash.....	Seattle, Wash.....	777–784
86	Nov. 16	S....	C....	Submarine Boat Corp. (option exercised).	Newark, N. J.....	5 Nassau Street, New York City.	785–884
*101 & 104	Nov. 20	S....	C....	American S. B. Co.	Buffalo, N. Y. (1)..	Cleveland, Ohio...	901, 904
*102–3–5–6	...do.....	S....	C....	.....do.....	Chicago, Ill. (2)...	.....do.....	902–3–5–6
*107–114	...do.....	S....	C....	.....do.....	Detroit, Mich.....	.....do.....	907–914
*115–120	...do.....	S....	C....	.....do.....	Cleveland, Ohio...	.....do.....	915–920
*121–124	...do.....	S....	C....	.....do.....	Superior, Wis.....	.....do.....	921–924
*125–132	...do.....	S....	C....	.....do.....	Lorain, Ohio.....	.....do.....	925–932
*133–135	...do.....	S....	C....	.....do.....	Buffalo, N. Y. (1)..	.....do.....	933–935
*136–140	...do.....	S....	C....	.....do.....	Chicago, Ill. (2)...	.....do.....	936–940
141	Nov. 23	S....	C....	Southern S. B. Corp.	Charleston, S. C...	Charleston, S. C...	885–900
142	Nov. 16	S....	C....	Pacific Coast S. B. Co.	Suisun Bay, San Francisco, Cal.	First National Bank Building, San Francisco, Cal.	941–950
143	Nov. 28	W...	C....	Meacham & Babcock S. S. Co.	Seattle, Wash.....	800 Third Avenue, Seattle, Wash.	951–954
144	Dec. 4	S....	C....	Pensacola S. B. Co.	Pensacola, Fla....	155 North Clarke Street, Chicago, Ill.	965–974
145	Dec. 7	S....	C....	Groton Iron Works	Alexandria, Va....	50 Broad Street, New York City.	975–986
146	Dec. 1	S....	C....	The Atlantic Corp.	Portsmouth, N. H	Portsmouth, N. H.	987–996
				Total.....	.....	.....	.....

Old yards..... 36
New yards..... 74

Total..... 110

executed to date, together with summary for all contracts—Continued.

Number of ships or hulls.				Tonnage of ships or hulls.				Total cost of ships or hulls.			
Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.	Total to date.	Wood.	Steel.	Composite.
762	.....	70	.....	4,040,900	.....	560,000	.....	$574,247,930	.....	$115,500,000	.....
772	.....	10	.....	4,135,900	.....	95,000	.....	589,637,930	.....	15,390,000	.....
782	.....	10	.....	4,229,900	.....	94,000	.....	605,617,930	.....	15,980,000	.....
786	.....	4	.....	4,249,900	.....	20,000	.....	608,917,930	.....	3,300,000	.....
794	.....	8	.....	4,320,300	.....	70,400	.....	620,885,930	.....	11,968,000	.....
894	.....	100	.....	4,820,300	.....	500,000	.....	696,485,930	.....	75,600,000	.....
896	.....	2	.....	4,827,400	.....	7,100	.....	697,897,680	.....	1,411,750	.....
900	.....	4	.....	4,841,600	.....	14,200	.....	700,721,180	.....	2,823,500	.....
908	.....	8	.....	4,870,000	.....	28,400	.....	706,561,180	.....	5,840,000	.....
914	.....	6	.....	4,891,300	.....	21,300	.....	710,941,180	.....	4,380,000	.....
918	.....	4	.....	4,905,500	.....	14,200	.....	713,861,180	.....	2,920,000	.....
926	.....	8	.....	4,933,900	.....	28,400	.....	719,701,180	.....	5,840,000	.....
929	.....	3	.....	4,944,550	.....	10,650	.....	721,891,180	.....	2,190,000	.....
934	.....	5	.....	4,962,300	.....	17,750	.....	725,541,180	.....	3,650,000	.....
950	.....	16	.....	5,082,300	.....	120,900	.....	744,981,180	.....	19,440,000	.....
960	.....	10	.....	5,176,300	.....	94,000	.....	760,773,180	.....	15,792,000	.....
964	4	.....	.....	5,190,300	14,000	.....	.....	762,993,180	$2,220,000	.....	.....
974	.....	10	.....	5,280,300	.....	90,000	.....	777,573,180	.....	14,580,000	.....
986	.....	12	.....	5,393,100	.....	112,800	.....	795,621,180	.....	18,048,000	.....
996	.....	10	.....	5,481,100	.....	88,000	.....	809,701,180	.....	14,080,000	.....
996	379	559	58	5,481,100	1,344,900	3,929,200	207,000	809,701,180	128,840,832	653,128,348	$27,732,000

Thirty-six contracts are placed in yards having previous Emergency Fleet Corporation contracts.

Number, type, and dead-weight tonnage of vessels under contract or requisitioned by the Emergency Fleet Corporation, segregated as to wood, composite, and steel.

Type of vessels.	Total.		Wood.		Steel.		Composite.	
	Number of vessels.	Dead-weight tonnage.	Number of vessels.	Dead-weight tonnage.	Number of vessels.	Dead-weight tonnage.	Number of vessels.	Dead-weight tonnage.
UNDER CONTRACT.								
Cargo (tons):								
3,500	455	1,594,500	359	1,256,500	46	163,000	50	175,000
4,000	16	64,000	8	32,000			8	32,000
4,700	12	56,400	12	56,400				
5,000	160	800,000			160	800,000		
6,000	7	42,000			7	42,000		
7,500 and under	92	689,200			92	689,200		
8,800	64	563,200			64	563,200		
9,000	54	486,000			54	486,000		
10,000 and under	66	625,800			66	625,800		
Total	926	4,921,100	379	1,344,900	489	3,369,200	58	207,000
Cargo and transports (tons), 8,000	70	560,000			70	560,000		
Grand total	996	5,481,100	379	1,344,900	559	3,929,200	58	207,000
UNDER REQUISITION.								
Collier (tons):								
5,000 and under	3	14,700			3	14,700		
7,500 and under	1	6,800			1	6,800		
8,800 and under	5	43,000			5	43,000		
Total	9	64,500			9	64,500		
Passenger and cargo (tons):								
5,000 and under	7	32,958			7	32,958		
6,000 and under	2	10,600			2	10,600		
Total	9	43,558			9	43,558		
Tanker (tons):								
5,000 and under	2	9,100			2	9,100		
7,500 and under	7	49,300			7	49,300		
8,800 and under	4	33,010			4	33,010		
9,000 and under	9	81,000			9	81,000		
10,000 and under	12	115,400			12	115,400		
12,500 and under	18	192,545			18	192,545		
15,000 and under	6	84,800			6	84,800		
Total	58	565,155			58	565,155		
Cargo (tons):								
3,500 and under	99	321,240			99	321,240		
5,000 and under	37	160,200			37	160,200		
6,000 and under	5	28,000			5	28,000		
7,500 and under	47	335,460			47	335,460		
8,000 and under	2	16,000			2	16,000		
8,800 and under	58	508,200			58	508,200		
9,000 and under	14	126,000			14	126,000		
10,000 and under	25	243,170			25	243,170		
12,500 and under	28	332,450			28	332,450		
15,000 and under	2	28,000			2	28,000		
Total	317	2,098,720			317	2,098,720		
Grand total	393	2,771,933			393	2,771,933		
Grand total requisitioned and constructed	1,389	8,253,033	379	1,344,900	952	6,701,133	58	207,000

Senator NELSON. Were not most of them, as a matter of fact, not in existence at all?

Admiral BOWLES. I think that most of them were not in existence when the contracts were let.

Senator NELSON. So the contract was really, in the first place, to build a shipyard and then, in the next place, to build ships—was not that it?

Admiral BOWLES. Senator, when I submit the contracts that you called for I will endeavor to furnish you an analysis which will show that.

Mr. Chairman, I have three copies of this list.

The CHAIRMAN. Does that give the address of the contractors, as well?

Admiral BOWLES. Yes; it gives the name of the company, the location of the works, and the office address in each case.

Senator NELSON. It does not, however, I suppose—and it was not called for, but it would have been a good plan if it had been there—and describe the number of ships?

Admiral BOWLES. It does give the number of ships and the numbers assigned to it by the corporation and the contract price.

Senator NELSON. And the tonnage?

Admiral BOWLES. And their tonnage.

Senator NELSON. All right; then it is good.

Admiral BOWLES. The second item that you asked for was:

2. The number of ships that have been constructed, if any, and the place where and by whom so built.

Up to December 21 the only ships completed for the Emergency Fleet Corporation are those that were requisitioned, building in private yards, on August 3. I submit the statement showing in the summary there were 49 ships.

Senator NELSON. Requisitioned?

Admiral BOWLES. Requisitioned and completed up to December 21; a total dead-weight tonnage of 3,000,865 tons.

Senator NELSON. Are those in the service now?

Admiral BOWLES. Yes; but they are not all in our service.

Senator NELSON. But they are in some service?

Admiral BOWLES. They are in some service. This statement includes also a detailed list giving the company by whom these ships were built, names of the vessels, the dead-weight tonnage in each case, who the former owners were, and the dates that the vessels were accepted.

Senator NELSON. Let me ask you, for my information, the dead-weight tonnage that you speak of is the freight capacity, is it not?

Admiral BOWLES. Senator, if this is a suitable opportunity, I would like to explain this tonnage business.

Senator NELSON. Yes; I would like to get clear about it, if you have no objection, Mr. Chairman.

The CHAIRMAN. No; certainly.

Admiral BOWLES. Gross tonnage is the ordinary record of the tonnage of merchant vessels and is the internal cubic capacity of the vessel divided by 100; that is, a gross ton is 100 cubic feet measured inside the frames of the space devoted to the carriage of cargo or passengers, or is otherwise inclosed.

Senator NELSON. That is gross tonnage?

Admiral BOWLES. That is gross tonnage.

The CHAIRMAN. That is the ton of 2,240 pounds?

Admiral BOWLES. No; it is simply 100 cubic feet of volume and has nothing to do with weight.

Senator NELSON. It is just so much space for each ton.

The CHAIRMAN. Yes; but so much space per ton, but the ton you are figuring is 2,240 pounds and not 2,000 pounds.

Admiral BOWLES. No, sir; a gross ton is simply 100 cubic feet of space, and has nothing whatever to do with weight.

Senator NELSON. It may be lead, or furniture, or anything; it is simply a matter of space.

Admiral BOWLES. Dead-weight tonnage is the ordinary method of expressing the commercial value of a cargo vessel for purposes of charter or purchase, and it is intended to be a measure of the cargo-carrying capacity. It is arrived at in this way: The displacement of a vessel at any time is her actual weight in tons of 2,240 pounds. The dead-weight tonnage is the difference between the displacement of the vessel when loaded to her Plimsoll-line mark, and the displacement of the vessel when she is light in steaming condition, but with no crew, stores, water, or fuel on board. So that in order to arrive at the carrying capacity in long tons of a vessel you must deduct from the dead-weight tonnage, so-called, the fuel, the weight of water, crew, and stores.

Senator NELSON. And the ballast, too?

Admiral BOWLES. Ballast, if any.

I have prepared this graphic diagram to show you the relation between dead-weight tonnage and gross tonnage of vessels of different sizes and kinds. There is no general rule.

Senator NELSON. I understand the British have a different system of computing tonnage from ours?

Admiral BOWLES. There are a number of systems. There is the the Suez Canal, and there is the Panama Canal, and there is the British law of net registered tonnage, and theAmerican law, which is almost exactly the same——

Senator NELSON. As the British?

Admiral BOWLES. As the British.

If I want to finish the subject of tonnage, I must tell you what the net registered tonnage is.

The CHAIRMAN. I think that difference between our law and the British has to do with the deck.

Admiral BOWLES. Somewhat.

The net registered tonnage is the measure of volume also; it is the gross tonnage, less the space occupied by the engines and boilers, plus 75 per cent, plus the space occupied by the crew, and some other detailed deductions, but it is supposed to be the basis of taxation for port dues and canal dues.

This diagram which I show you [exhibiting diagram to the committee] gives you the varying relations between dead-weight tonnage and gross tonnage. The black part shows by the height of the columns the approximate gross tonnage of vessels of different sizes, and the top line, the full line, which is not hatched in, shows the dead-weight tonnage of the corresponding ships, and you will see that for two types the dead-weight tonnage is more than the gross tonnage. That is because those two types of vessels are substantially

passenger ships; they happen to be the designs of troop ships. The troop ships have a much larger cubic capacity with reference to their carrying capacity, being passenger vessels, than cargo boats do, and that accounts for the fact of this abnormal difference of tonnage.

I hope, Senator, I have made myself plain.

Senator NELSON. We have three classes of tonnage, gross tonnage, dead-weight tonnage, and net registered tonnage?

Admiral BOWLES. Yes, sir.

The CHAIRMAN. The stenographer will put that into the record. Can it go in without the colors?

Admiral BOWLES. Yes, sir; it can be put in without the colors.

(The data referred to by Admiral Bowles is printed on page 126 in full.)

Admiral BOWLES (continuing). I will continue with this list of requisitioned vessels.

This statement also shows you a list of vessels which were released from requisition before they were completed.

Senator NELSON. How many of those?

Admiral BOWLES. There were nine vessels.

Senator NELSON. Were they domestic or foreign or both?

Admiral BOWLES. There were three foreign—those that were released.

Senator NELSON. And the others were domestic?

Admiral BOWLES. The others were domestic vessels, and they were in two classes—those that were released.

Senator NELSON. They were steel ships?

Admiral BOWLES. They were steel ships.

Senator NELSON. And what was the total tonnage of the nine?

Admiral BOWLES. The total tonnage of the nine I will have to give you approximately, as I have not the exact figures on this statement, was about 60,000 tons.

Senator NELSON. What was the occasion of releasing them?

Admiral BOWLES. The most of these vessels were released because they were Lake vessels, built for Lake service only, and not of canal size. The others were ore vessels, building for the Bethlehem Steel plant at Sparrows Point, Md., and were of a type that were not adapted to general service and were considered essential for the steel business.

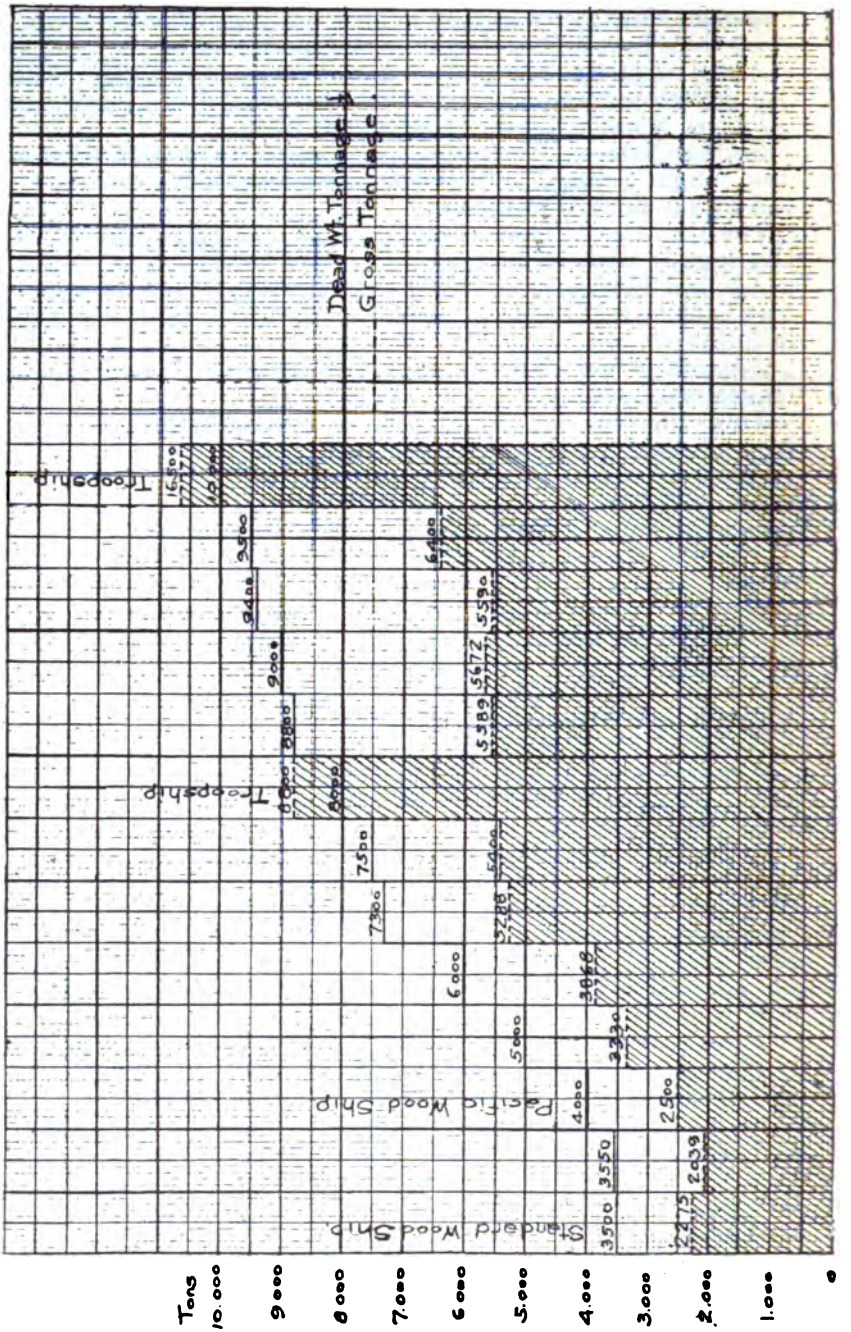
The CHAIRMAN. Let that list be included.

(The list, submitted by Admiral Bowles is here printed in full, as follows:)

Summary.

	Ships.	Total dead-weight tonnage.
Requisitioned vessels completed since date of requisition	43	253,235
Requisitioned vessels released before completion and since completed	6	47,630
Total	49	300,865

EXHIBIT No. 1.—*Diagram showing size and type of vessels and relation of dead weight tonnage to gross tonnage on vessels of various sizes.*



Requisitioned vessels completed and retained by Shipping Board; also those completed and reconveyed to former owners.

Plant.	Hull No.	Name.	Type.	Dead-weight tonnage.	Former owner.	Date accepted.	Date reconveyed.
AMERICAN SHIPBUILDING CO						1917.	
Chicago, Ill	83	War Banner	Cargo	3,100	Cunard	Oct. 31	.....
Do	84	War Hound	do	3,100	do	Nov. 19	.....
Cleveland, Ohio	467	War Penguin	do	3,100	do	Oct. 8	.....
Do	468	War Finch	do	3,100	do	Nov. 17	.....
						1917.	
Detroit, Mich	209	War Song	do	4,100	do	Sept. 22	Oct. 2
Do	210	War Path	do	4,100	do	Sept. 27	.....
Do	211	War Beaver	do	3,100	do	Nov. 1	.....
Do	212	War Honour	do	3,100	do	Nov. 14	.....
Do	213	War Fox	do	3,100	do	Nov. 23	.....
Superior, Wis	528	War Chant	do	3,100	do	Sept. 21	.....
Do	529	War Signal	do	3,100	do	Oct. 29	.....
Total vessels	11	Total dead-weight tonnage.	.....	36,100	.....	.....	.....
BALTIMORE DRY DOCK AND SHIPBUILDING CO., BALTIMORE, MD.							
Locust Point	78	Wm. Isom	Tanker	5,000	Sinclair Gulf.	Nov. 12	.....
BETHLEHEM SHIPBUILDING CORPORATION (LTD.), SOUTH BETHLEHEM, PA.							
Fore River	265	F. J. Luckenbach.	Cargo	10,000	E. Luckenbach.	Nov. 28	
Harlan & Hollingsworth	442	W. H. Tilford.	Tanker	8,130	Standard Oil.	Dec. 13	Dec. 18
Sparrows Point, Md	163	Walter D. Munson.	Cargo	5,800	Munson	Sept. 14	Oct. 11
Union Plant, San Francisco, Cal.	134	F. W. Weller	Tanker	14,900	Standard Oil.	Dec. 6	Dec. 16.
Do	140	Wm. Jebson	do	10,475	Wm. Jebson.	Dec. 8	
Total vessels	5						
Total dead-weight tonnage.	.....	.....	.....	49,005			
CHESTER SHIPBUILDING CO., CHESTER, PA.							
Chester, Pa	350	Hisko	Tanker	9,000	H. Oesterwald.	Dec. 6	
GREAT LAKES ENGINEERING WORKS, DETROIT, MICH.							
Ashtabula, Ohio	172	Sidi Marbrouk	Cargo	4,000	Cie de Algerienne.	Oct. 25	
Do	173	Perregaux	do	4,000	do	Nov. 15	
Ecourse, Mich	168	Florence H	do	5,500	do	Oct. 23	
Do	169	SNA4	do	5,500	Cie de Paris.	Dec. 1	
Do	174	War Leader	do	4,000	Cunard	Nov. 12	
Do	175	Fagerfjord	do	4,000	Nilson-Nyquist.	Nov. 22	
Total vessels	6						
Total dead-weight tonnage.	.....	.....	.....	27,000			

Requisitioned vessels completed and retained by Shipping Board; also those completed and reconveyed to former owners—Continued.

Plant.	Hull No.	Name.	Type.	Dead-weight tonnage.	Former owner.	Date accepted.	Date reconveyed.
MANITOWOC SHIPBUILDING CO., MANITOWOC, WIS.							
Manitowoc	80	Ada	Cargo	3,500	Damp Skibsaktieselskabet	1917. Oct. 8	
Do	81	Motor I	do	3,500	K. Salvesen.	Oct. 24	
Do	82	War Castle	do	3,500	Cunard	Nov. 24	
Do	83	War Victor	do	3,500	do	Nov. 17	
Total vessels	4						
Total dead-weight tonnage.				14,000			
M'DOUGAL DULUTH CO., DULUTH, MINN.							
Duluth, Minn	2	Maski	Cargo	3,300	T. Hellesoe.	Nov. 19	
MOORE & SCOTT IRON WORKS, OAKLAND, CAL.							
Oakland, Cal	112	Sagaland	Cargo	7,100	Antiesselskapet Vestland.	Dec. 8	
NEWPORT NEWS SHIPBUILDING & DRY DOCK CO., NEWPORT NEWS, VA.							
Newport News, Va	201	O. B. Jennings.	Tanker	14,900	Standard Oil.	Oct. 31	1917. Oct. 31.
Do	204	El Capitan	Cargo	6,200	Southern Pacific.	Sept. 18	Nov. 9.
Do	206	Munindies	do	7,430	Munson S. S.	Dec. 6	
Total vessels	3						
Total dead-weight tonnage.				28,530			
NEW YORK SHIPBUILDING CORPORATION, CAMDEN, N. J.							
Camden, N. J	176	Deepwater	Cargo	12,650	Castner, Curren Bullet Co.	Oct. 10	
SKINNER & EDDY CORPORATION, SEATTLE, WASH.							
Seattle, Wash	6	Jeanette Skinner.	Cargo	8,800	Knut Knutsen.	Sept. 6	
Do	8	Lt. De Missiessy.	do	8,800	Messageries Maritimes.	Sept. 19	Sept. 26
Do	9	Indiana	do	8,800	Mitsui & Co.	Nov. 1	
Total vessels	3						
Total dead-weight tonnage.				26,400			
STANDARD SHIPBUILDING CORPORATION, NEW YORK, N. Y.							
Shooter's Island, N. Y	1	Jupiter	Cargo	7,300	Affreturs Reunis.	Nov. 5	

Requisitioned vessels completed and retained by Shipping Board; also those completed and reconveyed to former owners—Continued.

Fleet.	Hull No.	Name.	Type.	Dead-weight tonnage.	Former owner.	Date accepted.	Date reconveyed
TEXAS STEAMSHIP CO., BATH, ME.							
						1917.	
Bath, Me.	1	Maine	Cargo	9,530	Texas Co.	Oct. 9	
Do	2	Rhode Island	do	9,530	do	Dec. 1	
TOLEDO SHIPBUILDING CO., TOLEDO, OHIO.							
Toledo, Ohio	140	War Shell	Cargo	2,930	Cunard	Oct. 4	
Do	141	War Bayonet	do	2,930	do	Nov. 6	
Do	142	War Rifle	do	2,930	do	Nov. 16	
Total vessels	3						
Total dead weight tonnage.				8,790			
Total	43						
Total dead weight tonnage.				253,235			

Requisitioned vessels released before completion and since completed.

Yard.	Hull No.	Name.	Type.	Dead-weight tonnage.	Former owner.	Reconveyed.
AMERICAN SHIPBUILDING CO., CLEVELAND, OHIO.						
Chicago plant	81	Choctaw	Cargo	3,300	Atlantic, Gulf & West Indies Steamship Co.	Aug. 31, 1917
BETHLEHEM STEEL CORPORATION (LTD.), SOUTH BETHLEHEM, PA.						
Sparrows Point, Md., plant	160	Cubore	Ore carrier.	11,300	Ore Steamship Co.	Aug. 20, 1917
Do	161	Feltore	do	11,300	do	Oct. 29, 1917
Union plant, San Francisco, Cal.	142	War Sword	Cargo	10,000	Cunard Steamship Co.	Aug. 30, 1917
TOLEDO SHIPBUILDING CO., TOLEDO, OHIO.						
Toledo, Ohio	139	Limoges	Cargo	2,930	Cie de Orleans.	Sept. 11, 1917
NORTHWEST STEEL CO., PORTLAND, OREG.						
Portland plant	2	War Viceroy	Cargo	8,800	Cunard Steamship Co.	Oct. 23, 1917
Total vessels	6					
Total dead-weight tonnage.				47,630		

TABULATION No. 44.—*List of requisitioned vessels, by shipyards.*

[Dec. 12, 1917.]

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
Albina Engine & Machine Works, Portland, Oreg.	1	Margit	Damp	3,300	$462,000.00		Cargo	
	2	Erling	do	3,300	452,100.00		do	
	3		Skjold	3,800	Cost plus.	$526,300.00	do	
	4		Carl	3,800	Cost plus.	526,300.00	do	
	5		Gorm	3,800	Cost plus.	526,300.00	do	
	6		Viking	3,800	Cost plus.	526,300.00	do	
Total	6			21,800	914,100.00 2,105,200.00	2,105,200.00		
Aggregate of contract and estimated cost					3,019,300.00			
American Shipbuilding Co., Cleveland, Ohio	81	Choctaw	Atlantic Gulf	3,300	515,000.00		Cargo	
	83	War Banner	Cunard	3,100	585,800.00		do	
	84	War Hound	do	3,100	585,800.00		do	
	85	War Duty	do	3,100	581,000.00		do	
	86	War Laurel	do	3,100	628,000.00		do	
	209	War Song	do	4,100	721,140.00		do	
	210	War Path	do	4,100	721,140.00		do	
	211	War Beaver	do	3,100	581,000.00		do	
	212	War Honour	do	3,100	581,000.00		do	
	213	War Fox	do	3,100	581,000.00		do	
	214	War Martin	do	3,100	581,000.00		do	
	215	War Ferret	do	3,100	581,000.00		do	
	216	War Hope	do	3,100	581,000.00		do	
	217	War Palm	do	3,100	581,000.00		do	
	218	War Swift	do	3,100	581,000.00		do	
	219	War Thrush	do	3,100	628,000.00		do	
	220	War Lynx	do	3,100	628,000.00		do	
	467	War Penguin	do	3,100	581,000.00		do	
	468	War Finch	do	3,100	581,000.00		do	
	469	War Raven	do	3,100	581,000.00		do	
	470	War Oak	do	3,100	581,000.00		do	
	528	War Chant	do	3,100	585,800.00		do	
	529	War Signal	do	3,100	585,800.00		do	
	530	War Valour	do	3,100	581,000.00		do	
	531	War Otter	do	3,100	628,000.00		do	
	725	War Wren	do	3,100	581,000.00		do	
	726	War Birch	do	3,100	581,000.00		do	
	727	War Briar	do	3,100	581,000.00		do	

	728	War Maple	do	3,100	581,000.00		do	
	729	War Gull	do	3,100	581,000.00		do	
	730	War Branch	do	3,100	581,000.00		do	
	731	War Fortune	do	3,100	581,000.00		do	
	732	War Vigil	do	3,100	628,000.00		do	
	733	War Poplar	do	3,100	628,000.00		do	
	721		Producers	12,500	1,855,750.00		do	
	722		do	12,500	1,855,750.00		do	
	723		do	12,500	1,855,750.00		do	
	724		Standard Oil	8,500	1,512,000.00		Tanker	
Total	38			153,600	27,348,730.00			
Ames Shipbuilding & Dry Dock Co., Seattle, Wash.	1	War Brigade	Cunard	8,800	1,232,000.00		Cargo	
	2	War Apollo	do	8,800	1,232,000.00		do	
	3	War Cupid	do	8,800	1,232,000.00		do	
	4	Montrollte	Teagle	9,000	1,215,000.00		Tanker	
	5	L. J. Drake	Standard Oil	9,000	1,215,000.00		do	
	6		Cie. Generale	8,800	1,046,000.00		Cargo	
	7	War Diana	Cunard	8,800	1,214,400.00		do	
	8		Cie. Generale	8,800	1,046,000.00		do	
	9	War Dido	Cunard	8,800	1,232,000.00		do	
	10		Ames	8,800	[1] 1,550,000.00		do	
	11	War Hector	Cunard	8,500	1,475,000.00		do	
	12	War Helen	do	8,500	1,475,000.00		do	
	13	War Juno	do	8,500	1,475,000.00		do	
Total	13			113,900	16,639,400.00			
Baltimore Dry Dock & Shipbuilding Co, Baltimore, Md.	78	Wm. Ison	Sinclair Gulf	5,000	455,400.00		Tanker	
	81	Gen. De Cattlenau	Cie Generale	6,200	744,000.00		Cargo	
	82	War Whale	Cunard	6,200	744,000.00		do	
	83		Cie Generale	6,200	1,085,000.00		do	
	84		do	6,200	1,085,000.00		do	
	86		Garland	6,200	1,196,600.00		do	
	87		Cie Generale	6,200	1,196,600.00		do	
	88	War Neptune	Cunard	6,200	1,054,000.00		do	
	89	War Venus	do	6,200	1,054,000.00		do	
	91		Baltimore	6,200	[2] 1,209,000.00		do	
	92		do	6,200	[2] 1,209,000.00		do	
Total	11			67,000	11,032,600.00			
Chester Shipbuilding Co., Chester, Pa	340	Sudbury	Shawmut	7,500	585,000.00		Cargo	
	341	Springleaf	Cunard	9,000	810,000.00		Tanker	
	342	Summerleaf	do	9,000	868,500.00		do	
	343	Autumnleaf	do	9,000	868,500.00		do	
	344	Winterleaf	do	9,000	900,000.00		do	
	345		Nordgreen	9,000	900,000.00		do	
	346	War Gun	Cunard	8,800	880,000.00		Cargo	

[1] This vessel is building, builder's account. Corporation offered price. Corporation has accepted offer.

[2] Fixed price.

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D
Chester Shipbuilding Co., Chester, Pa. (Contd.)	347	Salisbury	Shawmut	8,800	$880,000.00		Cargo	
	348	Westfield	do	8,800	1,012,000.00		do	
	349		Hamilton	9,000	1,575,000.00		do	
	350	Hisko	Osterwald	9,000	1,300,000.00		Tanker	
	351		Federal	8,800	1,012,000.00		Cargo	
	352		Cie Generale	8,000	1,038,400.00		do	
	353		do	8,000	1,038,400.00		do	
	356		Christopherson	9,500	1,178,000.00		do	
	357		Hamilton	9,000	1,575,000.00		do	
	358		do	9,000	1,575,000.00		do	
	359		do	9,000	1,575,000.00		do	
	360		do	9,000	1,575,000.00		do	
	361		do	9,000	1,575,000.00		do	
	362		do	9,000	1,575,000.00		do	
	363		do	9,000	1,575,000.00		do	
	365		do	9,000	1,575,000.00		do	
	366		do	9,000	1,575,000.00		do	
	367		do	9,000	1,575,000.00		do	
	368		do	9,000	1,575,000.00		do	
	369		do	9,000	1,575,000.00		do	
	370		do	9,000	1,575,000.00		do	
Total	28			248,200	35,320,800.00			
Columbia River Shipbuilding Corporation, Portland, Oreg.	1	War Sirdar	Cunnard	8,800	1,086,800.00		Cargo	
	2	Santiam	Gilbert	8,800	1,086,800.00		do	
	3	War Agate	Cunard	8,800	1,086,800.00		do	
	4	War Diamond	do	8,800	1,086,800.00		do	
	5	War Bullet	do	8,800	1,094,720.00		do	
	6	War Arrow	do	8,800	1,094,720.00		do	
	7	War Dagger	do	8,800	1,144,000.00		do	
	8	Nivelle	Cie Generale	8,800	1,408,000.00		do	
	9	War Spear	Cunard	8,800	1,144,000.00		do	
	10	Poincaire	Cie Generale	8,800	1,408,000.00		do	
Total	10			88,000	11,640,640.00			
Craig Shipbuilding Co., Long Beach, Cal	124	Silverado	Pacific	3,000	445,000.00		Cargo	
	125	Eldorado	Western	3,000	445,000.00		do	
Total	2			6,000	890,000.00			

Cramp & Sons Engine Building Co., Philadelphia Pa.	445		Cramp	9,400	Cost plus.	$1,932,358.00	Cargo	9,500
	456		do	9,400	Cost plus.	1,932,358.00	do	9,500
	434	Oriente	Atlantic Gulf	4,500	[1] 1,350,000.00		Passenger and cargo.	4,400
	435	Orizaba	do	4,500	[1] 1,350,000.00		do	4,400
	442	Santa Ana	Grace	4,986	921,000.00		do	4,986
	443	Santa Lucia	do	4,986	921,000.00		do	4,986
	444	Santa Olivia	do	9,500	1,350,000.00		Cargo	9,500
	446	Santa Teresa	do	4,986	1,358,000.00		Passenger and cargo.	4,986
	447	Santa Malta	do	9,500	1,581,000.00		Cargo	9,500
Total	9			61,758	8,831,000.00 3,864,716.00	3,864,716		61,758
Aggregate of contract and estimated cost					12,695,716.00			
J. F. Duthie & Co., Seattle, Wash.	8	War Leopard	Cunard	8,800	43,685.00		Cargo	
	9	Hallbjorg	Kleppe	8,800	1,002,668.00		do	
	10	War General	Cunard	8,800	961,648.00		do	
	11	War Topaz	do	8,800	966,190.00		do	
	12	War Emerald	do	8,800	966,189.00		do	
	14	War Sun	do	8,800	1,134,000.00		do	
	15	War Moon	do	8,800	1,038,240.00		do	
	16	Viviani	Cie. Generale	8,800	1,672,000.00		do	
	17	War Fort	Cunard	8,800	1,474,000.00		do	
	18	War Disk	do	8,800	1,144,000.00		do	
	19	War Ruby	do	8,800	1,144,000.00		do	
	20	Petain	Cie. Generale	8,800	1,672,000.00		do	
Total	12			105,600	14,278,620.00			
Fore River Shipbuilding Co., Quincy, Mass.	264	K. I. Luckenbach	E. F. Luckenbach	10,000	877,000.00		Cargo	
	265	F. J. Luckenbach	do	10,000	877,000.00		do	
	267	Katrina Luckenbach.	do	10,000	1,100,000.00		do	
	268	Geo. W. Barnes	Petroleum	9,100	1,100,000.00		Tanker	
	269	W. L. Steed	do	9,100	1,100,000.00		do	
	272	War Crest	Cunard	8,500	1,360,000.00		Cargo	
	273	War Crown	do	8,500	1,360,000.00		do	
	297		E. F. Luckenbach	14,000	Cost plus.	1,669,220.00	do	
	298		do	14,000	Cost plus.	1,669,220.00	do	
Total	9			93,200	7,774,000.00 3,338,440.00	3,338,440.00		
Aggregate of contract and estimated cost					11,112,440.00			

[1] These ships have been changed to cost-plus basis.

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
Globe Shipbuilding Co., Superior, Wis	101		Christian Hannevig.	3,500	$455,000.00		Cargo	
	102		do	3,500	455,000.00		do	
	103		Smith	3,500	620,000.00		do	
	104		do	3,500	620,000.00		do	
Total	4			14,000	2,150,000.00			
Great Lakes Engineering Works, Detroit, Mich	168	Florence H	Cie de Algerienne	5,500	470,000.00		Cargo	
	169	S. N. A. 4	Cie de Paris	5,500	470,000.00		do	
	170		Pittsburgh	13,000	538,000.00		do	
	172	Sidi Mabrouk	Cie de Algerienne	4,000	330,000.00		do	
	173	Perregaux	do	4,000	330,000.00		do	
	174	War Leader	Cunard	4,000	330,000.00		do	
	175	Fagerfjord	Nilson & Nyquist	4,000	330,000.00		do	
	176	Mascott	Peterson	3,400	455,000.00		do	
	177	War Goblin	Cunard	3,300	646,000.00		do	
	178	War Elfin	do	3,300	646,000.00		do	
	179	War Imp	do	3,300	646,000.00		do	
	180	War Bugle	do	3,300	646,000.00		do	
	181	War Drum	do	3,300	646,000.00		do	
	182	War Music	do	3,300	646,000.00		do	
	183	War Satyr	do	3,300	646,000.00		do	
	184	War Sphinx	do	3,300	646,000.00		do	
	185	War Trumpet	do	3,300	646,000.00		do	
	186	War Cymbal	do	3,300	646,000.00		do	
	187	War Naiad	do	3,300	646,000.00		do	
	188	War Fairy	do	3,300	646,000.00		do	
	189	War Cornet	do	3,300	646,000.00		do	
	190	War Flute	do	3,300	646,000.00		do	
	191	War Sprite	do	3,300	646,000.00		do	
	192	War Gnome	do	3,300	646,000.00		do	
	193	War Harp	do	3,300	646,000.00		do	
	194		Clinchfield	3,300	875,000.00		do	
	195		do	3,300	875,000.00		do	
	196		do	3,300	875,000.00		do	
	197		do	3,300	875,000.00		do	
	198		do	3,300	875,000.00		do	
	199		do	3,300	875,000.00		do	
Total	31			119,300	19,485,500.00			

Hanlon Dry Dock & Shipbuilding Co., Oakland, Cal.	78		Smith-Lind	5,500	Cost plus	$734,525.00	Cargo	
	79		do	5,500	do	734,525.00	do	
Total	2			11,000		1,469,050.00		
Harlan & Hollingsworth Corporation, Wilmington, Del.	442	W. H. Tilford	Standard Oil	8,130	670,000.00		Tanker	
	445	J. A. Bostwick	do	11,720	1,000,000.00		do	
	446	O. T. Waring	do	8,130	707,500.00		do	
	449	H. B. Everest	Vacuum Oil	8,130	760,800.00		do	
	450		Ocean	4,500	945,000.00		Passenger and cargo.	
	451		do	4,500	935,000.00		do	
	453	Saetia	United	4,500	613,193.00		Cargo	
	454	Guara	do	4,500	613,193.00		do	
	455	Biram	do	4,500	613,193.00		do	
	456	Pilon	do	4,500	648,193.00		do	
	457		do	3,500	839,250.00		do	
	458		do	3,500	839,250.00		do	
Total	12			70,110	9,184,572.00			
Maryland Plant Co.	160	Cubore	Ore	11,300	Cost plus.	1,886,422.00	Ore carrier	
Bethlehem Steel, Sparrows Point, Md.	161	Feltore	do	11,300	Cost plus.	1,886,422.00	do	
	162	Bethore	do	17,060	Cost plus.	2,847,996.40	do	
	163	W. D. Munson	Munson	5,500	730,000.00		Cargo	
	165	Santore	Ore	11,300	Cost plus.	1,886,422.00	Ore carrier	
	166	Firmore	do	11,300	Cost plus.	1,886,422.00	do	
	167	War Dragon	Cunard	7,500	922,500.00		Cargo	
	168	Mangore	Ore	6,000	Cost plus.	1,001,640.00	Ore carrier	
	169	War Mercury	Cunard	7,400	1,332,000.00		Cargo	
	170	War Shark	do	7,400	1,332,000.00		do	
	172	Ampetco	American Pet	11,350	1,735,895.00		Tanker	
	173	War Dolphin	Cunard	7,500	1,290,000.00		Cargo	
	174	War Saturn	do	10,100	1,909,020.00		do	
	175	War Jupiter	do	10,100	1,909,020.00		do	
	176		Bethlehem	7,400	Cost plus.	1,235,356.00	do	
Total	15			142,510	11,160,435.00 12,630,680.40	12,630,680.40		
Aggregate of contract and estimated cost					23,791,115.40			
Manitowoc Shipbuilding Co., Manitowoc, Wis.	80	Ada	Dampskibsaktieselskabit. Ada.	3,500	240,000.00		Cargo	
	81	Motor 1	K. Salvesen	3,500	240,000.00		do	
	82	War Castle	Cunard	3,500	280,000.00		do	
	83	War Victor	do	3,500	280,000.00		do	
	86	War Sentry	do	3,500	300,000.00		do	
	87		Christoffer Hannevig.	3,500	280,000.00		do	
	88		do	3,500	280,000.00		do	
	90	War Comet	Cunard	3,400	645,000.00		do	
	91	War Mist	do	3,400	645,000.00		do	

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
Manitowoc Shipbuilding Co., Manitowoc, Wis. (Con.)	92		Nilson & Nyquist	3,500	$400,000.00		Cargo	
	93	War Cloud	Cunard	3,400	645,000.00		do	
	94	War Meteor	do	3,400	645,000.00		do	
	95	War Sky	do	3,400	645,000.00		do	
	96		Manitowoc	3,400	Cost plus.	$645,000.00	do	
Total	14			48,400	5,525,000.00 645,000.00	645,000.00		
Aggregate of contract and estimated cost					6,170,000.00			
McDougall-Duluth Shipbuilding Co., Duluth, Minn.	2	Maski	Helesoe	3,300	450,000.00		Cargo	
	3	War Centaur	Cunard	3,300	525,000.00		do	
	4		Cie Generale	3,100	635,500.00		do	
	5		do	3,100	635,500.00		do	
	6		do	3,100	635,500.00		do	
	7		do	3,100	635,500.00		do	
	8		do	3,100	635,500.00		do	
	9		McDougal-D	3,100	Cost plus.	582,459.00	do	
	10		do	3,100	Cost plus.	582,459.00	do	
Total	9			28,300	4,152,500.00 1,164,918.00	1,164,918.00		
Aggregate of contract and estimated cost					5,317,418.00			
Merrill-Stevens Co	1	Hull	Continental Transportation Co.	6,500	1,137,500.00		Cargo	
Sam'l L. Moore & Sons, Elizabeth, N. J.	115		United	3,500	850,000.00		Cargo	
	116		do	3,500	850,000.00		do	
	117		Gillespie	4,800	Cost plus.	1,165,680.00	do	
	3			11,800	1,700,000.00 1,165,680.00	1,165,680.00		
Aggregate of contract and estimated cost					2,865,680.00			
Moore & Scott Iron Works, Oakland, Cal.	112	Sagaland	Aktieselskapet-vestland.	7,100	834,250.00		Cargo	
	113	War Bay	Cunard	9,400	1,128,000.00		do	
	114		Nordgreen	9,400	1,151,500.00		do	

	115	Passatt	Thorpe & Weiss	9,400	1,151,500.00		do	
	116	War Beacon	Cunard	9,400	1,480,500.00		do	
	117	War Breeze	do	9,400	1,588,600.00		do	
	118	War Coast	do	9,400	1,588,600.00		do	
Total	7			63,500	8,922,950.00			
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.	201	O. B. Jennings	Standard Oil	14,900	960,000.00		Tanker	
	204	El Capitan	Southern	6,200	580,000.00		Cargo	
	205	J. C. Donnell	Atl. Refining	14,800	1,120,000.00		Tanker	
	206	Munindies	Munson	7,430	595,000.00		Cargo	
	207	Munaires	do	7,430	670,000.00		do	
	208	H. M. Flagler	Standard Oil	11,375	1,135,500.00		Tanker	
	209	F. D. Asche	do	11,375	1,135,500.00		do	
	212		Atlantic Gulf	7,200	1,200,000.00		Cargo	
	213		do	7,200	1,200,000.00		do	
Total	9			87,910	8,596,000.00			
New Jersey Shipbuilding Co., Gloucester, N. J.	201		Manss S. S. Co	5,000	875,000.00		Cargo	
	202		do	5,000	875,000.00		do	
	203		do	5,000	875,000.00		do	
	204		do	5,000	875,000.00		do	
	205		do	5,000	875,000.00		do	
	206		do	5,000	875,000.00		do	
	207		do	5,000	875,000.00		do	
	208		do	5,000	875,000.00		do	
	209		Christo er Hannevig.	5,000	[2] 875,000.00		do	
	210		do	5,000	[2] 875,000.00		do	
	211		do	5,000	[2] 875,000.00		do	
	212		do	5,000	[2] 875,000.00		do	
Total	12			60,000	10,500,000.00			
New York Shipbuilding & Dry Dock Co., Camden, N. J.	174	Sylvan Arrow	Standard Trans	12,650	875,000.00		Tanker	
	175	Broad Arrow	do	12,650	875,000.00		do	
	176	Deepwater	Castner Curran Bullett (Inc).	12,650	698,900.00		Collier	
	184	Sewall's Point	Darrow Mann	8,600	515,000.00		do	
	191		do	8,600	Cost plus.	582,048.00	do	
	192		do	8,600	Cost plus.	582,048.00	do	
	195		do	8,600	Cost plus.	582,048.00	do	
	182	Fairmont	Coastwise	8,600	507,500.00		do	
	183		Pocahontas	4,900	369,000.00		do	
	189	Gulfland	Gulf Refining	7,300	Cost plus.	494,064.00	Tanker	
	196	Gulf Queen	do	8,620	Cost plus.	583,401.60	do	
	193		Carpenter O'Brien	8,100	595,000.00		Cargo	

[1] Letter of Oct. 15, 1917, gives B. Stolt Nielsen as owner.

[2] Estimated

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
New York Shipbuilding & Dry Dock Co., Camden, N. J. (continued).	190		Petroleum	12,300	$1,010,000.00		Tanker	
	197	Santa Lucia	Grace	5,300	Cost plus.	$358,704.00	Passenger and cargo.	
	198	Santa Elisa	do	5,300	Cost plus.	358,704.00	do	
	206	Santa Tecla	do	3,800	Cost plus.	257,184.00	Cargo	
	202		Atl. Trans	11,925	Cost plus.	807,084.00	Cargo	
	203		do	11,925	Cost plus.	807,084.00	do	
	207		do	3,800	Cost plus.	257,184.00	do	
	204		New York	4,900	Cost plus.	331,632.00	Collier	
	205		do	4,900	Cost plus.	331,632.00	do	
	208		do	3,800	Cost plus.	257,184.00	Cargo	
	209		do	6,800	Cost plus.	460,224.00	Collier	
Total	23			184,620	5,445,400.00 7,050,225.60	7,050,225.60		
Aggregate of contract and estimated cost					12,495,625.60			
Pennsylvania Shipbuilding Co., Gloucester, N. J.	1	Desdemona	Cunard	7,000	930,000.00		Tanker	7,000
	2	John M. Connelly	J. M. Connelly S. S. Co.	7,000	930,000.00		do	7,000
	3	Lucretia	Cunard	7,000	930,000.00		do	7,000
	4	Charmian	do	7,000	930,000.00		do	7,000
	5	Iras	do	7,000	930,000.00		do	7,000
	6	Calpurnia	do	7,000	930,000.00		do	7,000
	7	War Serpent	do	12,500	1,562,500.00		Cargo	12,500
	8	War Horse	do	12,500	1,562,500.00		do	12,500
	9	War Priest	do	12,500	1,562,500.00		do	12,500
	10	War March	do	12,500	1,562,500.00		do	12,500
	11		Bulk Oil	12,500	1,562,500.00		do	12,500
	12		do	12,500	1,562,500.00		do	12,500
	13		do	7,500	937,500.00		do	7,500
	14		do	7,500	937,500.00		do	7,500
	15		Pennsylvania	12,500	Cost plus.	1,598,375.00	do	12,500
	16		do	12,500	Cost plus.	1,598,375.00	do	12,500
	17		do	12,500	Cost plus.	1,598,375.00	do	12,500
	18		do	12,500	Cost plus.	1,598,375.00	do	12,500
	19		do	12,500	Cost plus.	1,598,375.00	do	12,500
Total	19			194,500	16,880,000.00 7,991,875.00	7,991,875.00		194,500

Aggregate of contract and estimated cost					24,871,875.00			
Pusey & Jones Co., Wilmington, Del.	1001	War Nurse	Cunard	4,000	590,000.00		Cargo	
	1002	War Heroine	do	4,000	590,000.00		do	
	1003	War Metal	do	4,000	570,000.00		do	
	1004	War Platoon	do	4,000	570,000.00		do	
	1005	War Compass	do	4,000	560,000.00		do	
	1006	War Crater	do	4,000	560,000.00		do	
	1007	War Dart	do	4,350	603,000.00		do	
	1008	War Shield	do	4,350	603,000.00		do	
	1009		Bulk Oil	4,350	826,500.00		do	
	1010		do	4,350	804,750.00		do	
	1011		do	4,350	804,750.00		do	
	1012		do	4,350	783,000.00		do	
	1013		do	4,350	783,000.00		do	
	1014		do	4,350	761,250.00		do	
Total	14			58,800	9,421,250.00			
Seattle Construction & Dry Dock Co., Seattle, Wash.	91	Walter A. Luckenbach.	Luckenbach	10,500	945,000.00		Cargo	
	92		A. S. Reder Odfjell.	7,500	700,000.00		do	
	93		Cie. Generale	7,500	877,500.00		do	
	94		Stray	7,500	866,250.00		do	
	95		do	7,500	843,750.00		do	
	96		Barber	7,500	937,500.00		do	
	97	War Artist	Cunard	7,500	1,125,000.00		do	
	98	War Herald	do	7,500	1,125,000.00		do	
	99	War Bard	do	7,500	1,125,000.00		do	
	101	War Comrade	do	7,500	1,125,000.00		do	
	102	War Guide	do	7,500	1,125,000.00		do	
	103	War Regent	do	7,500	1,125,000.00		do	
Total	12			93,000	11,920,000.00			
Skinner & Eddy Corporation, Seattle, Wash.	12	Jas. G. Eddy	Nielson	8,800	1,000,000.00		Cargo	
	16	David Rogers	do	8,800	1,000,000.00		do	
	17	Eliz. Gibbs	do	8,800	1,100,000.00		do	
	6	J. Skinner	Knutson	8,800	1,188,000.00		do	
	10	War Flame	Cunard	8,800	1,064,800.00		do	
	11	Trontolite	Teagle	9,000	1,350,000.00		Tanker	
	8	Lt. De Missiessy	Messagerias Maritne.	8,800	2,500,000.00		Cargo	
	9	Indiana	Mitsui	8,800	2,500,000.00		do	
Total	8			70,600	11,702,800.00			
Standard Shipbuilding Co., New York, N. Y.	1	Jupiter	Les Affreteurs Reunis.	7,300	1,000,000.00		Cargo	7,217
	2	Stian	Salvensen	7,300	965,000.00		do	7,300
	3	War Unit	Cunard	7,300	925,000.00		do	7,300

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
Standard Shipbuilding Co., New York, N. Y. (ctd.)	4	War Speed	Cunard	7,300	$915,000.00		Cargo	7,300
	5		Cie. Generale	7,300	830,000.00		do	7,300
	6		Russian	7,300	875,000.00		do	7,300
	7		do	7,300	1,076,750.00		do	7,300
	8	War Pride	Cunard	7,300	1,065,800.00		do	7,300
	9		do	7,300	1,095,000.00		do	7,300
	10		Consorzio Veneziana.	7,300	1,095,000.00		do	7,300
	11		do	7,300	1,095,000.00		do	7,300
	12		De Luca	7,300	1,277,500.00		do	7,300
	13		do	7,300	1,277,500.00		do	7,300
Total	13			94,900	13,552,550.00			94,817
Staten Island Shipbuilding Co., Port Richmond, N. Y.	689	War Plane	Cunard	3,500	324,000.00		Cargo	3,500
	692	War Post	do	3,500	500,000.00		do	3,500
	693	War Toiler	do	3,500	500,000.00		do	3,500
	694	War Trader	do	3,500	595,000.00		do	3,500
	695	War Tramp	do	3,500	595,000.00		do	3,500
Total	5			17,500	2,514,000.00			17,500
Sun Shipbuilding Co., Chester, Pa	1	Chester Sun	Sun	10,300	1,100,000.00		Tanker	
	2	Sabine Sun	do	10,300	1,100,000.00		do	
	3	War Indian	Cunard	10,000	1,550,000.00		Cargo	
	4	War Trojan	do	10,000	1,550,000.00		do	
	5	M. E. Luckenbach	Luckenbach	10,000	1,390,000.00		do	
	6	Jacob Luckenbach	do	10,000	1,390,000.00		do	
	7	Merrimac	Shawmut	10,000	1,250,000.00		do	
	8	Deerfield	do	10,000	1,250,000.00		do	
	9		Luckenbach	10,000	1,400,000.00		do	
	10		do	10,000	1,400,000.00		do	
	13		Standard Oil	10 150	1.850 000 00		Tanker	
	14		do	10 150	1.850 000.00		do	
	17		Sun	10 000	Cost plus.	$1.412.700.00	do	
	18		do	10 000	Cost plus.	1.412.700 00	do	
	19		do	10 100	Cost plus.	1.426.827.00	do	
	20		do	10.100	Cost plus.	1.426.827.00	do	
Total	16			161,100	17.080.000.00 5.679.054.00	5,679,054.00		

Aggregate of contract and estimated cost					22,759,054.00			
Tampa Shipbuilding Co., Tampa, Fla.	31	War Wonder	Cunard	3,500	612,500.00		Cargo	3,400
	32	War Work	do	3,500	612,500.00		do	3,400
Total	2			7,000	1,225,000.00			6,800
Texas Shipbuilding Co., Bath, Me.	1	Maine	Texas	9,530	Cost plus	1,430,453.00	Cargo	
	2	Rhode Island	do	9,530	do	1,430,453.00	do	
	3	Massachusetts	do	9,970	do	1,496,497.00	do	
	4	New Jersey	do	9,970	do	1,496,497.00	do	
	10		do	9,500	do	1,425,950.00	Tanker	
	11		do	9,500	do	1,425,950.00	do	
	12		do	9,500	do	1,425,950.00	do	
	13		do	9,500	do	1,425,050.00	do	
	14		do	4,100	do	615,410.00	do	
	21		do	9,800	do	1,470,980.00	do	
	22		do	9,800	do	1,470,980.00	do	
	23		do	9,800	do	1,470,980.00	do	
	24		do	9,800	do	1,470,980.00	do	
Total	13			120,300		18,057,030.00		
Toledo Shipbuilding Co., Toledo, Ohio.	139	Limoges	Cie. de Orleans	2,930	280,000.00		Cargo	
	140	War Shell	Cunard	2,930	280,000.00		do	
	141	War Bayonet	do	2,930	280,000.00		do	
	142	War Rifle	do	2,930	Cost plus.	412,800.00	do	
	143	War Flag	do	2,930	Cost plus.	412,800.00	do	
	144	War Daisy	do	2,930	Cost plus.	412,800.00	do	
	145	War Lilly	do	2,930	Cost plus.	412,800.00	do	
	146	War Pansy	do	2,930	Cost plus.	412,800.00	do	
	147		Lewis	2,930	612,000.00		do	
	148		do	2,930	612,000.00		do	
Total	10			29,300	2,064,000.00 2,064,000.00	2,064,000.00		
Aggregate of contract and estimated cost					4,128,000.00			
Union Iron Works, San Francisco, Cal.	134	Fred. W. Weller	Standard Oil	14,900	1,340,000.00		Tanker	
	135	A. C. Bedford	do	14,900	1,340,000.00		do	
	150		Union Iron	11,500	Cost plus.	1,674,170.00	Cargo	
	140	Wilhelm Jebsen	Wilhelm Jebsen	10,475	1,035,000.00		Tanker	
	151		Union Iron	11,500	Cost plus.	1,674,170.00	Cargo	
	143	J. E. O'Neil	Atlantic Refining	10,475	1,350,000.00		Tanker	
	144	Herbert L. Platt	do	10,475	1,350,000.00		do	
	145	S. M. Spaulding	Petroleum	10,475	1,350,000.00		do	
	153		Union Iron	11,500	Cost plus.	1,674,170.00	Cargo	
	146	P. H. Harwood	Petroleum	10,475	1,350,000.00		Tanker	
	170		Union Iron	11,500	Cost plus.	1,674,170.00	Cargo	
	147	W. S. Rheem	Standard Oil	10,475	2,500,000.00		Tanker	
	148		Atlantic Refining	10,475	1,500,000.00		do	

TABULATION No. 44.—*List of requisitioned vessels, by shipyards*—Continued.

Yard.	Hull No.	Name.	Former owner.	Dead-weight tons.	Contract price.	Vessels on cost-plus basis at estimated cost.	Type.	Dead-weight tons reported by D. O.
Union Iron Works, San Francisco, Cal. (continued)	149		Atlantic Refining	10,475	$1,500,000.00		Tanker	
	154	Romulus	A. O. Lindvig	6,000	775,000.00		Cargo	
	162	War Harbor	Cunard	11,800	1,860,000.00		do	
	163	War Haven	do	11,800	1,860,000.00		do	
	164	War Ocean	do	11,800	1,950,000.00		do	
	165	War Rock	do	11,800	1,950,000.00		do	
	166	War Sea	do	11,800	1,950,000.00		do	
	167	War Cape	do	11,800	1,950,000.00		do	
	168	War Surf	do	11,800	1,950,000.00		do	
	169	War Wave	do	11,800	1,950,000.00		do	
	142	War Sword	do	10,000	1,800,000.00		do	
Total	24			270,000	32,610,000.00	$6,696,680.00		
					6,696,680.00			
Aggregate of contract and estimated cost					39,306,680.00			
Willimette Iron Works, Portland, Oreg	5	Landaas	Erland	8,800	1,100,000.00		Cargo	
	6	War Ally	Cunard	8,800	1,012,000.00		do	
	4	War Archer	do	8,800	920,000.00		do	
	3	Hallgrim	Kleppe	8,800	915,000.00		do	
	2	War Viceroy	Cunard	8,800	875,000.00		do	
	7	War Pearl	do	8,800	1,012,000.00		do	
	8	Umpqua	Stray	8,800	1,144,000.00		do	
	9	Joffre	Cie. Generale	8,800	1,672,000.00		do	
	10	Marne	do	8,800	1,672,000.00		do	
	11	Verdun	do	8,800	1,672,000.00		do	
	12	Pershing	do	8,800	1,672,000.00		do	
	13	Aisne	do	8,800	1,650,000.00		do	
	14	Argonne	do	8,800	1,650,000.00		do	
	15	Somme	do	8,800	1,650,000.00		do	
	16	Meuse	do	8,800	1,650,000.00		do	
Total	15			132,000	20,266,000.00			

SUMMARY.

	Number.	Dead-weight tonnage.	Total cost.
Vessels with contract price	364	2,505,128	$361,865,347
Vessels on cost-plus basis	67	550,880	[1] 73,922,439
Total	431	3,056,008	435,787,896

[1] Estimated.

NOTE.—Corrected dead-weight tonnage taken from data card Form 118.

The third item is [reading]—

3. The number of ships now under construction and where and by whom the same are being built, as well as the proportion of work done on each vessel up to the present time.

Senator NELSON. I understood yesterday, Admiral, that you had constructed one ship—that is, I understood that one ship, outside of these commandeered ships, had been constructed by the Emergency Fleet Corporation?

Admiral BOWLES. At the present time, Senator, there are four ships contracted for by the Fleet Corporation in the water—two wooden ships on the Pacific coast and two steel ships, each of 8,800 tons. One of those steel ships is promised to go into commission the day after Christmas.

Senator NELSON. So that you have really got four ships?

Admiral BOWLES. In the water.

Senator NELSON. In the water.

Admiral BOWLES. I am going to show you the condition of those that are on shore.

Senator NELSON. All right; that is what we want.

Admiral BOWLES. As to the number of ships that are under contract, here is a statement showing net tonnage and type of dead-weight tonnage of vessels under contract or requisitioned by the Emergency Fleet Corporation, segregated as to wood, composite, and steel, and I will read just the totals.

Senator NELSON. Yes; read the summary.

Admiral BOWLES. The grand total of the number of vessels is 1,389, of a total dead-weight tonnage of 8,253,033 tons. Of those, 379 are wooden vessels, of a total dead-weight tonnage of 1,344,900 tons; of the steel vessels, those under contract with the Fleet Corporation number 559, of a total dead-weight tonnage of 3,929,200 tons; of those requisitioned vessels still uncompleted there are 393, of a total dead-weight tonnage of 2,771,933. Composite vessels under contract with the Emergency Fleet Corporation, there are 58 vessels, with a dead-weight tonnage of 207,000 tons.

The CHAIRMAN. The number of vessels then under contract with the Emergency Fleet Corporation and their tonnage amounts to how much?

Admiral BOWLES. Nine hundred and ninety-six vessels, of 5,481,100 tons.

Senator JONES. How would we convert that into gross tonnage, or the tonnage that is given to us, when we are told by the press of the sinking of ships by submarines?

Admiral BOWLES. Nobody knows what you are told.

Senator JONES. I know, but what we see in the papers; they refer to so many tons. As I understand it, that is the English way of reckoning tonnage.

Admiral BOWLES. I do not know what those tons are, and I have never been told.

Senator JONES. It is stated here the other day——

Senator NELSON (interposing). The way the dispatches read, they are evidently copied from some marine register.

Admiral BOWLES. In all probability they are gross tons. I could not translate that into gross tons without going through a calcula-

tion based on this table I have already given you and have it at all accurate.

Senator JONES. I understood yesterday we would get this reduced approximately to gross tons by dividing it by 1.65.

Admiral BOWLES. I have shown you that that will not do as an average. If you want me to convert that into gross tons, I will do so.

Senator JONES. No; I do not. I just thought that was the case, providing 1.65 would give it approximately.

Admiral BOWLES. No.

Senator HARDING. Admiral, let me ask you, is it not supposed that the German reports of sinkings are dead-weight tons, while the English are the gross tons?

Admiral BOWLES. I can not answer, sir; I don't know.

Senator NELSON. I find this, Senator, that occasionally they have referred to a ship, and then the telegram says there are two ships by that name in the register, and sometimes they say "We can not find such a ship in the register." That would indicate that when a ship is sunk they turn to this Lloyd's register, I suppose they call it there, and there they have the name of the ship, and there is the tonnage. Now whether that is dead-weight or registered tonnage I can not tell you, but it is evidently taken from Lloyd's list.

The CHAIRMAN. Do you know what Lloyd's rule is about that, Admiral, as to the tonnage of ships?

Admiral BOWLES. They get both the gross and the net register tonnage in the register book.

Senator JONES. But they do not give the dead-weight tonnage?

Admiral BOWLES. I am not sure. I think they do, for certain classes of vessels.

You have asked us to show you the state of progress on each vessel. These are our regular sheets that we keep for each contract. [Exhibiting diagram to the committee.] These sheets show the number of the hull on our record, the name of the builder, the location of the yard, the amount of the contract, and this diagram represents by its length on a scale of months the time that was provided by the contract for the completion of that ship, and the red line indicates the time the contract provided that the ship was to be delivered. The black part shows the portion of the hull that has been completed for each ship, and it also shows whether the ship is ahead or behind her contract date. These sheets contain every contract, and the lists here show the delivery date promised, the estimated, and there [indicating] is a column for the actual. It also shows the promised date of laying the keel and the actual date; the promised launching date and the actual date, and the percentage of completion at the date of this report. These are prepared by us twice each month.

Senator NELSON. Now, Admiral, it is difficult for us to go through that.

Admiral BOWLES. Yes; it is difficult for you to go through that, and so I have prepared something else for you.

Senator NELSON. What I would like to know—and that comes to a practical question—is how many of these ships, for instance, can

you get out in January, how many in February, how many in March, and so on.

Admiral BOWLES. Senator, after we get through answering the questions that you have asked I am going to ask you to clear this room, and then I will give you all those facts.

Senator NELSON. All right; thank you.

Admiral BOWLES. Here is a graphic diagram, which is printed opposite page 229 of this hearing, that represents the progress of all the vessels under construction, and it also shows you some very interesting things [exhibiting diagram]. This circle [indicating], for instance, represents by its size and tonnage of composite vessels, and the hatched part shows the proportion of those vessels completed.

Senator HARDING. These are not confidential?

Admiral BOWLES. No, sir; I think it would be a very good thing to give those out. I hope you will agree with me when I get through.

This circle [indicating] next shows the tonnage of a wooden vessel and the proportion that we estimate complete on December 1.

Senator NELSON. That is, this shows it?

Admiral BOWLES. Yes, sir; the hatched part shows the portion that we estimated completed. Of course, this is not the number of vessels completed; it is the completed work on the whole program. That is the way we must look at it.

The next circle [indicating No. 3] represented the tonnage on requisitioned vessels building in private yards, and the hatched part shows the proportion of the vessels now in the yards completed on December 1. The next circle shows the tonnage of steel vessels contracted for by the Fleet Corporation, and the hatched part the proportion of the work completed.

This circle [indicating] represents the whole program—the large circle—of the Fleet Corporation, taking everything together, and the hatched part shows the estimated portion completed at this time.

Now, then, this small circle——

The CHAIRMAN. Does not that very nearly give the information that you thought ought not to go out?

Senator NELSON. Oh, no.

The CHAIRMAN. It shows how much is completed?

Admiral BOWLES. No; the other—I can explain to you in a minute—is a military thing and this is not.

The CHAIRMAN. It is different, but it seems to me that that is rather confidential.

Admiral BOWLES. This small circle [indicating], entitled "The average shipbuilding of the United States," is the average of the United States for 15 years in the production of merchant vessels.

This large circle here is 15 times in area of the little one, and you can see that it does not materially differ in size from the program of the Fleet Corporation, taken altogether.

[After a pause.] Oh, I see; this, perhaps, should be considered confidential. I will ask the members of the committee to return those diagrams to me.

This diagram shows the enormous expansion in shipbuilding which is expected of this country, in comparison with what we have ever done before, and the necessity for the creation of new shipyards.

In order to perhaps visualize the stage of completion of each contract, I have made on this diagram a graphic statement of the con-

dition of the work on each contract showing these spaces representing the progress of the Fleet Corporation ships and requisitioned vessels and on this side the condition of progress in the wooden ships [exhibiting diagram to the committee].

Senator NELSON. You can leave that with us?

Admiral BOWLES. Yes, sir. The fourth question that you asked the Shipping Board was [reading]:

4. Copies of all shipbuilding contracts entered into in order that the committee can ascertain the terms of the same.

Senator NELSON. Admiral, ought not these contracts to be treated as confidential—I mean, for the use of the committee?

Admiral BOWLES. I think they ought to be treated for the use of the committee.

Senator NELSON. And not printed. We can examine them.

Admiral BOWLES. I am having an analysis of these contracts—as to their character—prepared; but it is not finished; but I will submit it, Mr. Chairman, with your permission.

The CHAIRMAN. I think that would be all right. We can put that in the record.

Admiral BOWLES. I can tell you this, that Gen. Goethals executed during his time 54 contracts, 40 for wooden vessels and 4 for composite and 10 for steel. He committed the corporation to 33 additional contracts, which were afterwards executed, but not in the form in which he left them.

Senator NELSON. Were they for steel ships?

Admiral BOWLES. I do not know; they were mostly for wooden vessels, I think.

In addition to those 33, he started negotiations on 8 contracts, those negotiations being completed by Admiral Capps.

The total number of these contracts is 146; and perhaps you would like to have me explain to you the conditions under which the vessels are building in these yards, constructed by the Fleet Corporation through agents?

Senator NELSON. Yes.

Admiral BOWLES. Take the American International Corporation——

Senator HARDING. Ought these contracts to be executed, Admiral?

Admiral BOWLES. I think so.

Senator HARDING. I move that we go into executive session.

Senator NELSON. Are these contracts copies or are they the original contracts?

Senator HARDING. I move that we go into executive session.

The CHAIRMAN. Before we do that, may I ask the admiral one or two questions with regard to the list that was furnished us on yesterday? The average price of the steel ship, for instance, complete, is about $160 a ton?

Admiral BOWLES. For what ships?

The CHAIRMAN. For the steel ships. There is a difference. For instance, here is one American International Corporation contract for 50 ships at $154, and then the same corporation for 70 ships at $206.25. What is the occasion for that?

Admiral BOWLES. The ships are of quite different type. The first one is plain cargo, 7,500 tons dead weight; the second one is a 15-knot, 8,000 tons troopship, a much more expensive ship.

The CHAIRMAN. The American Shipbuilding Co. has 6, I notice, at $198.84 apiece, and 34 at $205.63.

Admiral BOWLES. The 34 ships contain an amortization of plant made necessary for the construction of those ships by next season.

The CHAIRMAN. And the 34 involve speed also?

Admiral BOWLES. Involve speed of construction, but not any speed of the ship; they are 10-knot cargo boats.

The CHAIRMAN. The 34?

Admiral BOWLES. Yes, sir.

The CHAIRMAN. And that price is $205.63. It seems to be higher than the average price.

Admiral BOWLES. Decidedly.

The CHAIRMAN. Do you know for what reason?

Admiral BOWLES. I can not say.

The CHAIRMAN. Then there is one with Meacham & Babcock Steam Boiler Co., wooden, and their price on four ships is $158.57, whereas the average price seems to be on wood $139.

Admiral BOWLES. There must be some difference in the terms of that contract. I could not tell you from memory.

The CHAIRMAN. There is one of Newcomb Lifeboat Co. on 4 ships at $105.02, and then follows 12 ships with Grant-Smith-Porter-Guthrie Co., at $85.71. That seems to be quite a change.

Admiral BOWLES. I ought to explain, Senator, that I did not fix these prices. The differences, however, are largely explainable by the difference in the terms of the contract. The Grant-Smith-Porter-Guthrie Co., for instance, are constructing a shipyard at the expense of the United States, and the price that is given in that table probably has no relation whatever to the total cost of the ships, but merely fixes some limit on the actual cost of the hull to be built in the shipyard when it is finished.

The CHAIRMAN. Where is that yard?

Admiral BOWLES. The Grant-Smith-Porter-Guthrie Co. is a yard on the Pacific coast in the neighborhood of Portland—between Portland and Seattle.

The CHAIRMAN. Then the Alabama Dry Dock and Shipbuilding Co., two ships at $72.75, whereas the average price seems to be on those ships about $84.87. Can you give any explanation as to that?

Admiral BOWLES. No; I could not. I could look up one, but I do not know it now.

Senator JONES. That will probably appear when you furnish the synopsis of these contracts.

Admiral BOWLES. The synopsis I was just passing to was of a different character, showing the different types of contracts.

The CHAIRMAN. May I ask this explanation in regard to the statement: The X indicates contracts let on the cost per dead-weight ton basis, and the star indicates contracts let on the cost-plus basis. What do you mean by that?

Admiral BOWLES. Why, if the contract is let on the basis of the cost being determined in accordance with the act of Congress and then a profit allowed, it is called a "cost-plus" contract.

The CHAIRMAN. What kind of a contract is usually allowed?

Admiral BOWLES. Well, we have been avoiding contracts of that type altogether. The Navy Department has established a rule of cost

and 10 per cent, and where we have resorted to it that has been our rule.

The CHAIRMAN. And the contract made on cost per dead-weight ton basis—what is that contract?

Admiral BOWLES. That simply means that the measure of cost is based upon the actual measurement of dead-weight tons when the vessel is finished; that is, it is not a lump sum for a specific ship; the total value is arrived at by the measurement of the actual tonnage. Of course, I do not want to have my answer in regard to cost and 10 per cent taken to refer to these agency contracts, in which the profit allowed is materially less.

The CHAIRMAN. This money, for instance, for the construction of the ways, that eventually comes back from the contract, does it?

Admiral BOWLES. We have a great variety of contracts, Senator, and in many contracts let before Admiral Capps's time we got no money back.

The CHAIRMAN. Who owns the ways?

Admiral BOWLES. In some cases the corporation owns the improvements; in some cases it has an option to purchase the whole.

You have asked us what ships are being built in private yards for other than Government account, and by whom and where. I must explain to you that we have no record of vessels begun prior to August 3 under 2,500 tons dead-weight. Our inquiry at the time of the requisitioning related only to steel vessels over 2,500 tons dead-weight, so that there might have been at that time wooden vessels of any size building and steel vessels of less than that that we took no account of. And no general order forbidding the construction of vessels has ever been issued by the Fleet Corporation, but, as a matter of practice, it has been necessary to obtain the permission of the Shipping Board to build anything, because we have practically taken up the distribution of all shipbuilding materials. That has been necessary in order to fulfill our program.

Senator NELSON. Then I suppose another thing has been, they wanted to escape from requisition, too?

Admiral BOWLES. In some cases they did, but in some cases the vessels are of types that would not have been requisitioned, but they have come to us for permission because they could not get a windlass or an anchor chain or anchor or even lumber without our permission. So we can only show you the list of permits that have been issued, and we can not inform you conclusively as to all the vessels that may be building in private yards which are not subject to our requisition and are below our size.

Senator NELSON. Have you the number of permits there?

Admiral BOWLES. Here is a list of permits that have been issued by the Shipping Board.

Senator NELSON. There is no objection to putting that in the record, is there?

Admiral BOWLES. I see none.

Senator NELSON. It contains nothing of a confidential nature?

Admiral BOWLES. Nothing.

The CHAIRMAN. That may go in the record.

Admiral BOWLES. We have a list also of vessels of which we have had accidental knowledge that are building in private yards, and I

will hand you that, but I can give you no assurance that it is complete, giving all ships that may be under construction.

Senator NELSON. Let it go in, anyway, Mr. Chairman.

The CHAIRMAN. Yes; in connection with that statement.

Admiral BOWLES. That finishes what you have asked us for.

(The two lists referred to above are here printed in full, as follows:)

Permits granted to build vessels for private or foreign ownership.

Request from—	Date.	To build for—	Number of vessels.	Type.	Deadweight tonnage.	Price per deadweight ton. Proposed.	Price per deadweight ton. Allowed.	Date allowed.	Remarks.
	1917.							1917.	
Kiernan & Kern	Sept. 8	Japanese interests	8	Wood steamships	3,500 or 4,000	$144.00	$144.00	Sept. 20	
Willamette Shipbuilding Co	Sept. 20	British interests	8	Comp. Supple & Ballin	4,500		138.00	Sept. 21	
Cox & Stevens	Sept. 15	French interests	5	Wood auxiliary schooners	2,600-3,500	150.00	150.00	...do	
Jno. H. Mathis Co	Sept. 13	Philadelphia & Reading R. R.	2	Wood car floats (feet)	250			Sept. 22	
C. C. Daniels Tank Shipbuilding Co.	Aug. 29	Standard Oil Co	2	Steel tank ships	11,500	175.00	175.00	...do	Nov. 13 contract turned down by Standard Oil Co.
Mississippi Shipbuilding Co	Sept. 26	French interests	6	Wood auxiliary schooners	2,000	135.00	135.00	Sept. 26	
Do	...do	Greek interests	1	...do	1,000	135.00	135.00	...do	
Do	Oct. 1	L. P. Italiano	6	Wood auxiliary schooners, semi-Diesel engine.	2,000	135.00	135.00	Oct. 3	
American Shipbuilding Co	Oct. 2	Norwegian interests	6	Steel	3,550	250.00	230.00	...do	Nov. 2, district officer informed contract failed to go through.
Mississippi Shipbuilding Co	...do	Lloyds Italiano	3	Schooners	1,500	135.00	135.00	Oct. 5	
Eastern Shore Shipbuilding Co.	Oct. 3	Johnson Literage Co	1	Schooner (sail)	2,250	80.00	80.00	Oct. 8	
Sawyer Shipyard	Oct. 6	French Government	30	Patrol boats, 2 motors, 300 H. P., 91 feet C.	40	8.00	$2,000.00	Oct. 9	
Beaumont Shipbuilding & Dry Dock Co.	Oct. 11	Private, Kirley Lumber Co.	4	Wood schooners (2) Wood schooners (2)	2,200 1,100	150.00	150.00	Oct. 12	Price allowed if equipped with auxiliary power.
American Shipbuilding Co	Oct. 16	French Government	4	Wood, semi-Diesel engine.	3,500	150.00	142.00	Oct. 18	
Pacific Shipbuilding Co	...do	...do	4	Wood	3,500	150.00	142.00	...do	
Meacham & Babcock	...do	...do	4	Wood, motor, 700 H. P.	3,500	150.00	142.00	...do	
Crowninshield Shipbuilding Co.	...do	Rogers & Webb, Boston	2	Schooners, 231 '	1,800	145.00	145.00	...do	
Brunswick Shipbuilding Co	Oct. 18	Private	1	Sailing vessel	650	203.00	203.00	Oct. 23	
Pensacola Maritime Corporation	Oct. 13	Foreign	1	4-masted schooner, motor	1,500	145.00	145.00	...do	
Do	...do	...do	1	...do	1,200	190.00	190.00	...do	
Do	...do	...do	1	4-masted schooner, No. 4	2,200	160.00	135.00	...do	
Eastern Shore Shipbuilding Co.	Oct. 23	French	2	Cargo—motor driven	3,000	150.00	150.00	Oct. 24	
			2	Schooners	2,250	100.00	100.00	...do	
Pensacola Maritime Corporation.	Oct. 13	Foreign	1	Schooner, 4-masted, motor	1,100	190.00	190.00	...do	
Do	...do	...do	1	Schooner, 4-masted, motor, No. 3.	2,200	160.00	135.00	...do	
Do	...do	...do	1	Schooners, 4-masted, motor, No. 5.	2,200	160.00	135.00	...do	

Permits granted to build vessels for private or foreign ownership—Continued.

Request from—	Date.	To build for—	Number of vessels.	Type.	Deadweight tonnage.	Price per deadweight ton. Proposed.	Price per deadweight ton. Allowed.	Date allowed.	Remarks.
Pensacola Maritme Corporation (continued).	1917. Oct. 13	Foreign	1	Schooner, 4-masted, motor	1,200	$166.00	$145.00	1917. Oct. 24	Dec. 12, Southern Dry Dock & Shipbuilding Co., Orange, Tex., now ask sell this vessel for $185,000; recommended.—G. M.
Fernandina Shipbuilding & Dry Dock Co.	Oct. 4	French	6	Cargo vessels	3,500	145.00	145.00	...do....	
Savannah Engineering & Construction Co.	Oct. 24	Norwegian	6	Baldhead rig auxiliary cargo schooners.	2,000	87.50	87.50	Oct. 25	Dec. 13, granted permission to transfer permit to Savannah Co.
The Foundation Co.	Oct. 11	French Government	20	Steel	4,000	175.00	150.00	Nov. 16	
Newport News Shipbuilding & Dry Dock Co.	Oct. 27	Owners	1	Steamship Argonne, repaid.	4,334			Oct. 29	
Liberty Shipbuilding Co.	Oct. 29	French	12	Wood, steamship, sails, adapted for power.	2,400	90.00	90.00	Oct. 30	
Bagdad Shipbuilding Co.	Oct. 26	Builder	4	Schooner, auxiliary, 4-masted (gross)	800	145.00	145.00	Oct. 31	
Pensacola Maritime Corporation	Oct. 24	Hoodless Shipbuilding Co., for foreign interests.	1	Schooner, motor, 3-masted, baldheaded, wood.	810	140.00	140.00	...do....	
Do	...do....	....do	1	....do	810	150.00	150.00	Nov. 1	
Do	...do....	....do	1,2,3	....do	1,750	145.00	145.00	Nov. 2	
Do	...do....	....do	1	....do	700	150.00	150.00	...do....	
Do	...do....	....do	1	....do	810	140.00	140.00	Oct. 31	
Do	...do....	....do	1	....do	700	135.00	135.00	Nov. 2	
Do	...do....	....do	1	....do	700	135.00	135.00	...do....	
Do	Nov. 1	By Gulf Shipbuilding Co.							Nov. 10, held up pending decision on policy

Total	420,464
Less refusals	44,100
Total	376,364

Power vessels under construction under 2,500 tons.

Builder.	Class.	Tonnage.	Time of completion.	Owners.
Pacific American Fisheries, South Bellingham.	Steamer	2,200	May, 1918	Owner's account.
Sloan Shipyards Corporation, Olympia.	Gas screw	2,400		Clinchfield Navigation Co.
Do	do	2,400	May, 1918	Do.
Do	do	2,400	do	Do.
Do	do	2,400	do	Do
Supple-Ballin Shipbuilding Corporation, Portland.	Steamer	2,500		Builder's account.
Do	do	2,500		Do.
Kiernan & Kern Shipbuilding Co, Portland.[1]	do	1,450 2,500 17,500	Winter of 1918	Do.
Rolph Shipbuilding Co., Eureka.	do	1,600	Not yet started	Do.
Do	do	1,600	do	Do.
Do	do	1,600	do	Do.
National Shipbuilding Co., Seattle.	do	750	Winter of 1918	Wakefield Co.
Matthews Shipbuilding Co., Hoquiam, Wash.	Gas screw	1,150	February, 1918	Hart Wood Lumber Co.
Do	do	65	March, 1918	E. K. Wood Lumber Co.
Do	Point loma gas screw.	1,[illegible]	July, 1918	Hart Wood Lumber Co.
Clooney Construction & Towingle, Westlake, La.	Steamer	1,300	December, 1918	Gulf Export & Transportation Co.
Olympia Shipbuilding Co., Olympia.	Auxiliary schooner	2,300	Soon	Norwegians.
Do	do	2,300	Spring of 1915	Do.
Do	do	2,300	do	Do.
Pacific American Fisheries, South Bellingham.	do	2,500	January, 1918	Owner's account.
Peninsula Shipbuilding Co., Portland.	Eris, auxiliary schooner.	1,600	Now	Builder's account.
Do	Gamma, auxiliary schooner.	1,600		Do.
Do	No. 5, auxiliary schooner.	1,600		Do.
Puget Sound Bridge Dredge Co., Seattle.	Auxiliary schooner	1,600	December, 1917	French Republic.
Do	do	1,600	January, 1918	Do.
Do	do	1,600	February, 1918	Do.
Do	do	1,600	March, 1918	Do.
Do	do	1,600	April, 1918	Do.
Do	do	1,900	May, 1918	Builder's account
Do	do	1,900	June, 1918	Do.
St. Helens Shipbuilding Co., St. Helens.	do	2,000		C. R. McCormack.
Supple-Ballin Shipbuilding Corporation, Portland.	do	2,500		Gaston, Wms. Wigmore.
Do	do	2,500		Do.
Chas. E. Fulton, San Pedro	do	1,800		J. R. Hanify Co.
Hammond Lumber Co., Eureka.	do	950		Builder's account.
Do	do	950		Do.
Rolph Shipbuilding Co., Eureka.	Auxiliary barkentine.	1,500		Not yet started.
Do	do	1,500		Do.
Do	do	1,500		Do.
Jas. Robertson, Benicia	Auxiliary schooner	1,250		Standard Oil Co.
Do	do	1,500		A. F. Mahoney.
National Shipbuilding Co., Seattle.	do	2,800	Spring of 1918	Furman & Pedersen.
Do	do	2,800	do	Norwegians.
Aberdeen Shipbuilding Co., Aberdeen, Wash.	Fanestrand auxiliary schooner.	2,250	Now	Kahrs & Kahrs, Norwegian.
Do	do	1,600		W. R. Grace & Co.
Do	Suzanne, schooner.	1,500	Now	French-American Ship Co., French.
Columbia Engineer Works, Portland, Oreg.	Auxiliary schooner	700	February, 1918	M. T. Snyder.
Do	do	700	March, 1918	Do.
Do	do	800	April, 1918	Builders.
G. M. Standifer Construction Corporation, Portland, Oreg.	Gas screw	2,100	Now	I. T. Williams Co.
Do	Auxiliary schooner	1,800	do	Libby, McNiel & Libby.
Grays Harbor Shipbuilding Co., Aberdeen, Wash.	do	2,500		Norwegian account.
Do	do	2,500		Do.
Do	do	2,500		Do.
Do	do	2,400		Owner's account

[1] 8 more steamers contemplated.

Power vessels under construction under 2,500 tons—Continued.

Builder.	Class.	Tonnage.	Time of completion.	Owners.
Kruse & Banks, North Bend, Oreg.				
McEachern Ship Co., Astoria, Oreg.	Auxiliary schooner	1,800	Soon	A. O. Andersen Co.
Do	do	1,800	February, 1918	Do.
Do	do	1,800	March, 1918	Do.
Groton Iron Works, Groton, Conn.	do	800		
American Car & Foundry Co., Wilmington, N. C.	do	1,400	May, 1918	Owner's account.
Do	do	1,400	July, 1918	Do.
Brunswick Marine Construction Co., Brunswick.	do	1,400	December, 1917	R. Lawrence Smith.
Do	do	1,400	January, 1918	Do.
Do	do	1,600		Do.
Do	do	1,600		Do.
Hillyer Spearing Dunn, Jacksonville.	do	800	December, 1918	David Berg Distilling Co.
Howland & Nelson, Orange, Tex.	do	1,250	Spring of 1918	Orange Marine Corporation.
Do	do	1,250	do	Do.
Wilmington Iron Works, Wilmington, N. C.	do	2,000	January, 1918	
Do	do	2,000	March, 1918	
Savannah Engineering & Construction Co., Savannah, Ga.	do	1,250		R. Lawrence Smith.
Do	do	1,250		Celtic Transportation Co.
Slidell Shipbuilding Co., Slidell, La.	do	750	December	C. L. Dimon.
Do	do	1,000		Do.
Do	do	1,000		Do.
Do	do	1,200		Baltic Steamship Co.
Do	do	1,200		Do.
F. H. Swails, Orange, Tex	Auxiliary barkentine.	1,700		Henry Piaggio.
Do	do	1,700		
Do	do	1,700		
Do	do	1,700		
Do	do	1,700		
Do	do	1,700		
Do	do	2,200		
Do	do	2,200		
Do	do	2,200		

Total steamers	48,200
Total auxiliary schooners	117,650
Grand total	165,850

The CHAIRMAN. This completes the hearing for this afternoon. We will now adjourn until next Wednesday at 2 o'clock p. m.

(Thereupon, at 5.10 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. on Wednesday, December 26, 1917.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

WEDNESDAY, DECEMBER 26, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m. in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Bankhead, Nelson, Jones, Sherman, Harding, Calder, and Johnson.

The CHAIRMAN. Mr. Stevens is present this afternoon, and he would like to proceed now, and we can go on with Admiral Bowles after we have heard Mr. Stevens, if that is agreeable to the committee.

Senator NELSON. I can see no objection to that, Mr. Chairman.

The CHAIRMAN. Then the committee will hear you now, Mr. Stevens.

STATEMENT OF HON. RAYMOND B. STEVENS, COMMISSIONER OF THE UNITED STATES SHIPPING BOARD.

The CHAIRMAN. Mr. Stevens, you are one of the commissioners of the Shipping Board?

Mr. STEVENS. I am.

The CHAIRMAN. When did you begin your service there?

Mr. STEVENS. March 15.

The CHAIRMAN. This year.

Mr. STEVENS. Yes, sir; this year.

The CHAIRMAN. You are one of the trustees of the Emergency Fleet Corporation, are you?

Mr. STEVENS. I am.

The CHAIRMAN. What position do you hold in that corporation other than trustee?

Mr. STEVENS. I am treasurer.

The CHAIRMAN. You are treasurer? What have been your principal activities since you became a member of the Shipping Board, Mr. Stevens?

Mr. STEVENS. My principal activities have been in connection with the labor department, both in the operation of ships and in the building of ships.

The CHAIRMAN. Well, you might state to the committee what you found the situation with regard to labor to be when you took charge, and what the present situation is.

Mr. STEVENS. I will say, Mr. Chairman, that I first took charge of the labor problem in connection with the operation of ships and the loading of ships, and the board secured an agreement with the officials of the International Longshoremen's Union for a voluntary arbitration during the period of the war of all disputes which might arise in connection with the loading and unloading of vessels; and we created local boards in all the chief ports in the United States and a central board in Washington, of which I have been the chairman. And we so far have been able to adjust peaceably all wage disputes and other disputes that have arisen in connection with the loading and unloading of ships.

Senator NELSON. Excuse me for interrupting you, but I want to get this information in the record at this point: That work is all carried on on the closed-shop theory, is it not?

Mr. STEVENS. No; not entirely.

Senator NELSON. Not entirely?

Mr. STEVENS. No. On the west coast it has been open shop entirely. On the Atlantic coast in some places it is closed shop and in some places they employ both union and nonunion labor.

Senator NELSON. Where you find that last-named condition to exist do you find any trouble in keeping union men and nonunion men at work in the same shop?

Mr. STEVENS. No.

Senator NELSON. There has been no trouble of that kind?

Mr. STEVENS. There has been no trouble. The longshoremen's union does not, as a rule, demand the closed shop; that is, they do not demand that only union men be employed.

Senator NELSON. So that you have had no trouble on that score?

Mr. STEVENS. No.

Senator NELSON. Excuse me for interrupting you. You may now proceed with your statement.

Mr. STEVENS. We also secured an agreement, which was signed by the officials of the seamen's union and signed by the Shipping Board and by the principal shipping companies, which established a wage scale which should prevail for a year among sailors and firemen and cooks, etc., aboard all the merchant ships. For a considerable time I have——

Senator NELSON (interposing). How much is that wage scale in excess of the scale which prevailed before the war?

Mr. STEVENS. Well, very much more, Senator Nelson.

Senator NELSON. Well, how much of an increase, by percentages?

Mr. STEVENS. In the war zone I should think it was nearly double; in the war zone there is a bonus of 50 per cent.

Senator NELSON. But outside of the war zone how much of an increase has there been?

Mr. STEVENS. It is nearly double.

Senator NELSON. It is nearly double all through?

Mr. STEVENS. Yes; all through.

Senator NELSON. So that the sailors now, and the officers, in our merchant fleet get nearly double what they did before the war?

Mr. STEVENS. Yes.

Senator NELSON. Are they all union men, or do they allow nonunion men to ship?

Mr. STEVENS. They allow nonunion men to ship. The Pacific coast is pretty fairly organized, and a good many of the ship companies there, I think, deal only with the union; but there are a few companies, I think, which do not. On the Atlantic coast it is not closed shop; union men work with nonunion men. The union men, I think, expect preference; they expect to be given an opportunity to supply the men.

Now, passing to the labor question in connection with shipbuilding, work in that field has been done only in the last two months or so. There are always two aspects to the labor problem: First, to keep the men who are engaged in the industry continuously at work, and, second, to secure the additional number of men necessary for such a large program, if we want expedition in the building of the ships.

On the question of keeping the men who are there continuously at work and avoiding strikes and lockouts, the board secured an agreement, to which the Navy was also a party and which was signed up by practically all the international presidents of the unions that are represented in that industry, which provided that during the period of the war all disputes concerning wages and conditions of labor should be adjusted by a Federal arbitration board, which should establish wages and other conditions where there was a dispute. And that board recently went to the Pacific coast and established there a uniform scale for the whole Pacific coast, and at the present time they are taking up wage demands and complaints on the Atlantic coast.

Senator NELSON. Is there not a strike now impending among the metal workers on the Pacific coast?

Mr. STEVENS. Not in the shipyards.

Senator NELSON. No; but in the metal trades there is, is there not?

Mr. STEVENS. There is.

Senator NELSON. And those metal workers are closely connected with the equipment and furnishing of the ships, are they not?

Mr. STEVENS. Some of them are.

Senator NELSON. Yes; and there is a threat of a tie-up there, is there not?

Mr. STEVENS. Yes; that is true.

Senator NELSON. Now, is it not a fact that our shipbuilding operations have been, to a large extent, retarded by strikes and threatened strikes?

Mr. STEVENS. They have been retarded—I can give you the exact figures of that, Senator Nelson. Reports from 106 shipbuilding companies which have contracts with the Emergency Fleet Corporation show that there have been stoppages of work in 30 different companies since the war began. The number of days actually lost amounts to 596,992 working days.

Senator NELSON. Yes.

Mr. STEVENS. And that means about 20,000 men out 30 days, approximately.

Senator NELSON. That is the whole of it?

Mr. STEVENS. Yes. Of course, there are a great many of those stoppages that occurred before we undertook to establish some machinery for the harmonious adjustment of differences.

Senator NELSON. I refer to the period that the Shipping Board and the shipbuilding corporation have been in operation.

Mr. STEVENS. Yes.

The CHAIRMAN. Do you mean to say that all those companies experienced those difficulties?

Mr. STEVENS. Thirty out of 106 companies have had actual stoppages of work, and of course there have been threatened strikes frequently. I personally have adjusted quite a good many strikes.

Senator NELSON. What has been the nature of the strike? Has it been a strike simply for improved conditions in the matter of wages, or has the open-shop question and the union question figured in the matter?

Mr. STEVENS. Most of the strikes have been for better working conditions, increase in pay, and shorter hours. There have been strikes which grew out of union questions—unfair material, etc.

Senator NELSON. In this San Francisco metal-trade strike that is now impending, they tentatively raised the wages about 30 per cent and then you agreed, your board, did it not, to increase it 10 per cent more during the war? Tell us about that situation, please.

Mr. STEVENS. The adjustment board took as the standard for increase in wages the increase in the cost of living, and since the last wage had been established by agreement between the men and the companies——

Senator NELSON (interposing). When was that?

Mr. STEVENS. 1916.

Senator NELSON. 1916; that was a year ago?

Mr. STEVENS. Yes; August 1, 1916, the unions and the companies signed up an agreement for one year fixing the wage scale.

Senator NELSON. And that was an increase on the preexisting wage scale, was it not?

Mr. STEVENS. I do not know; it was not in San Francisco, but it may have been in Seattle.

Senator NELSON. Yes.

Mr. STEVENS. The wage-adjustment board found that living had increased 31 per cent; so it added practically 31 per cent to that standard of wages which had been fixed in 1916.

Senator NELSON. And the men insisted on an increase of 50 per cent, did they not?

Mr. STEVENS. I do not know; they wanted a wage scale of $6.

Senator NELSON. Well, practically it amounted to an increase of 50 per cent, did it not—what they wanted?

Mr. STEVENS. I do not think it was quite 50 per cent; it would have been, perhaps, 40 per cent.

Senator NELSON. Then your board went down and agreed to make up 10 per cent more, did it not?

Mr. STEVENS. No; they were dissatisfied with that, and, in a way, appealed to the Navy and the Shipping Board for some readjustment. The Navy and the Shipping Board agreed that they would give 10 per cent bonus.

Senator NELSON. Yes.

Mr. STEVENS. That is, to all men who put in continuous work every week, who got in six days a week, and agreed that by February that would be made a permanent 10 per cent advance in wages.

Senator NELSON. To all that were engaged in shipbuilding work?

Mr. STEVENS. Yes; to all engaged in shipbuilding work.

Senator NELSON. You would give them a bonus in addition to their other wages?

Mr. STEVENS. Yes. We hoped that in that way we could secure more continuous employment, as all of these plants have found a difficulty in keeping their men at work for the full six days in the week.

Senator CALDER. I want that point made clear, that the Shipping Board has agreed to add to the cost of the ships 10 per cent; or in other words, pay to the shipyard owner 10 per cent additional for labor that worked each week a full continuous week. Is that right?

Mr. STEVENS. Ten per cent of what the labor cost; that is, the Shipping Board, the shipping corporation, will bear the expense of this 10 per cent bonus to the man who works a full week.

Senator CALDER. Then, if a man works only five days out of six he does not get that additional 10 per cent?

Mr. STEVENS. He will not, unless he was sick or had some other good excuse.

Senator CALDER. If he gives a good excuse, he gets the 10 per cent?

Mr. STEVENS. He gets the 10 per cent; yes.

Senator CALDER. Is it not a fact that practically every man under those circumstances gets the 10 per cent?

Mr. STEVENS. No; I am sorry to say—of course, it has not been in effect long enough on the Pacific coast for us to make up the returns upon it; but I know there are some companies in the East which have had a bonus system of that kind, and in those cases it is not true that all the men get it.

Senator HARDING. Mr. Stevens, has your board endeavored to find out what is the difficulty in getting the men to work six days a week?

Mr. STEVENS. Well, we know in general what it is; yes.

Senator HARDING. What do you think is the reason the men will not work six days a week?

Mr. STEVENS. There are in the shipbuilding industry a good many young men. Some of that work is very hard work, riveting especially. Men without families, if they can earn in four days as much money as they need, are very apt to lay off; and it is with the single men, who under the present wages are earning quite high pay, that they have that difficulty.

Senator BANKHEAD. What is the average wage?

Mr. STEVENS. I could not give you that.

Senator BANKHEAD. You could not give us the average rate they are earning?

Mr. STEVENS. Well, there is a great deal of it that is piecework, and it varies a great deal in different plants. I could not give you the average wage, Senator Bankhead.

Senator HARDING. Pardon me, Senator Bankhead, but you are touching a very interesting question here, that is going to unavoidably interest Congress. You stated just a moment ago, Mr. Stevens, that you were making these extra advances of wages on account of the increased cost of living, and yet, apparently, it is not necessary for the men to work more than four days a week to live under the present cost of living.

Mr. STEVENS. Well, I would say that that was for single men, Senator Harding, and men who are working on piecework and are getting the highest wage and working overtime.

Senator HARDING. Well, is it or is it not a fact that the high scale of wages has had a tendency to decrease the hours of labor?

Mr. STEVENS. Well, that is the opinion that has been stated to us by quite a good many manufacturers. I would not want to say that; I do not know whether the percentage of men now who do not work the full week is greater than it was before. I think you will find in almost any industry that there is more or less of a percentage of men who do not give a continuous week's work.

Senator NELSON. Do you not think that the effect of the high wages and the extra increase you have mentioned has been that the men lay off a part of the time; that they feel that they have earned enough to live on and to have a good time on working four days a week instead of the whole week?

Mr. STEVENS. That is a factor in this, of course——

Senator NELSON (interposing). Then, is it not true that you have practically raised up a kind of kicking gun by this increase?

Mr. STEVENS. Well, as to that——

Senator HARDING (interposing). How many men are at present employed in the shipbuilding industries, do you know?

Mr. STEVENS. Something over 100,000. I might say that the latest return I have is for eighty-odd plants out of 106, and that shows 97,347 men.

Senator HARDING. These men are exempted from military service, are they?

Mr. STEVENS. A good many men have been taken from the plants into the military service. There has been a great difference in the action of the various exemption boards; in some cases they have exempted the men and in other cases they have not.

The CHAIRMAN. It depends on the showing they make as to the necessity for their services in the shipyards, does it not?

Mr. STEVENS. Yes; and it also depends largely on the places.

Senator NELSON. And depends somewhat on the exemption board?

Mr. STEVENS. Yes; somewhat on the exemption board and on the attitude that the company takes.

Senator HARDING. How many men do you think necessary to complete the shipbuilding program which Mr. Hurley outlined to the committee—say 5,000,000 tons of shipping for the next year?

Senator CALDER. Senator Harding, may I interrupt to ask a question upon the cost of labor? As I understand it, Mr. Stevens, your contracts with the shipbuilders contain a provision that where additional wages are demanded by the workingmen, the board will allow that additional rate, provided, of course, the board agrees that the rate ought to be allowed. In other words, the shipbuilder with whom you have made contracts can collect from the board any additional labor costs over their contract price?

Mr. STEVENS. That is true in general. There are two clauses which appear in nearly all the contracts. One is a general clause that the contractor shall obey such instrutcions concerning labor as may be given by the Fleet Corporation. Most of the contracts were figured on the going scale of wages at the time the contract was let and contained a provision that if there is any increase in wages which the shipping corporation authorizes or assents to that increase shall be borne by the corporation and that amount shall be added to the price of the ship.

Senator NELSON. And the Fleet Corporation is left with the power to grant that increase or not in the contracts; is that correct?

Mr. STEVENS. I do not quite understand.

Senator NELSON. Does the Fleet Corporation reserve to itself the right to increase the wages?

Mr. STEVENS. It can, yes; it can increase or decrease the wages.

Senator HARDING. Mr. Stevens, have you ever settled any controversy without an increase of wages?

Mr. STEVENS. I do not remember any at the moment; increases have frequently been much less than those demanded.

Senator HARDING. Has not the fact that your contracts contained provisions for increase tended to encourage strikes?

Mr. STEVENS. I do not think so, Senator. I think the thing which more than any others tends to encourage strikes is the feeling on the part of the workmen that the contractors are making a mint of money out of the business. I have found that condition existing in every instance where I have gone and come personally in contact with the men as I did for a number of weeks while the adjustment board was on the Pacific coast, in an effort to keep the peace on the Atlantic coast. I think if the men realize that this money is coming directly out of the Government they will not be any more excessive in their demands than if they think it is coming out of the company. That is my impression from coming in contact with the men in attending a great many meetings of unions, talking to them and addressing them about it. I think the impression that if the men feel that it is Uncle Sam who is paying this they are going to get all they can is not true, as a general proposition.

Senator HARDING. Nevertheless, the men know that the most of these contracts contain the provision I have referred to, do they not?

Mr. STEVENS. I think they do. Although I found the impression to be quite general among the men that the contracts were straight cost plus 10 per cent, where the employer would not only bear the expense of the additional wages but would get a profit out of it; and I know I produced a surprise by explaining to the men the actual details of the contracts.

Senator HARDING. Was there not an agreement that such a provision should be written into all contracts providing for adjustment of labor disputes?

Mr. STEVENS. You mean with whom, Senator?

Senator HARDING. Let us say the Department of Labor, for instance.

Mr. STEVENS. No, sir; I do not think so. I never heard of any such agreement, although that proviso was put in the contracts originally by Gen. Goethals, who realized that this whole question of wages and labor would have to be more or less in control of the Government.

Senator HARDING. Would it be your opinion, after several months of observation, that there are some forces in labor which are endeavoring to engage in profiteering?

Mr. STEVENS. Why, there is that tendency, I suppose. I think it is in the decided minority. I think the labor-union men or the men engaged in the actual building of ships are very much like other people.

Senator HARDING. Just the same as capital?

Mr. STEVENS. Yes; as between laborers and capital, between workmen and business men, or farmers and business men, or Congressmen and business men—it is all about 50/50.

Senator HARDING. Would you mind going back and telling me how many men are needed to carry out this program?

Mr. STEVENS. That is a very difficult question to answer. There are probably now somewhere—taking in these figures on companies we have not got accurate reports on—around 150,000 men engaged in ship construction directly. Those numbers certainly ought to be more than doubled.

Senator HARDING. Do you think double the number will carry out the program you have in contemplation?

Mr. STEVENS. It will take more than double that number of men to double the production of the men who are already there, because you have got to bring in a lot of men who are unskilled or semi-skilled, and I should assume that in order to come up to the production which we desire it would probably take between 200,000 and 300,000 additional men.

Senator HARDING. Then you are going to need 400,000 men——

Mr. STEVENS (interposing). May I state right there, it is pretty difficult to estimate exactly the number of men which will be required. The shipbuilding industry has always been one in which there has been a large overturn of labor, a great many men coming and going; and there is a great loss in production and a great deal of inefficiency as a result of this continual flow of men from shipyard to shipyard and into the industry and out of the industry.

Senator HARDING. Would it be fair to ask what prospect you have for supplying the necessary number of men to complete this program?

Mr. STEVENS. I think that can be done; yes. There are some trades represented in the shipyards, both steel and wood, which it is very difficult to rapidly increase. In shipbuilding the shipwright or the ship carpenter is difficult to get and difficult to train. In the construction of steel ships, ship fitters and calkers and a few other trades are difficult to secure, but there are a great many men in the country who have been skilled in other industries who can be very rapidly worked into shipbuilding. House carpenters, bridge builders, dock builders—men who have been used to handling heavy timbers—can very soon become qualified to do a lot of the work in the wooden shipbuilding industry. Building-trades men, especially structural iron and steel workers, have been trained in a way that they will become very soon capable men in the shipyards, and at the present time there is a slackening down in many industries which can furnish a lot of men who are already somewhat trained in that direction. For instance, the structural iron work is everywhere slowing down. There is going to be quite a large body of structural iron workers who can be trained and are now being trained in the shipbuilding business.

Senator HARDING. In that connection, is the board doing anything to recruit the ranks of shipbuilding labor?

Mr. STEVENS. It is. In the beginning and for some time the getting of men was left to the individual contractors to follow their own methods, as they have been in the past, and as generally done with respect to other Government contractors, the contract being let to a certain firm or contractor, and it was his business to get the

men. We realize that so many men are needed in these industries, so many contracts have been let, that it is going to require Government aid in the getting of the men. We have already established on the Pacific coast, in cooperation with the Department of Labor, Federal employment agencies which will get from the ship companies on the coast statements of what their needs are in the various grades of men, and then draw those men as far as possible from the district west of the Rockies, using Federal agencies and local agencies—State agencies and municipal agencies—where they exist, in getting the men for the yards; and we probably will have a similar organization in the East.

Senator HARDING. Going back for just a moment; you say you are on this arbitration board?

Mr. STEVENS. No; I am not on the arbitration board for settling strikes in the shipbuilding industry. I happen to be chairman of the adjustment board on longshoremen, which is one of the first, I thing perhaps the first, agreement drawn up between the Government and organized labor providing for voluntary arbitration.

Senator HARDING. I won't ask you, Mr. Stevens, the policy of the board, but I want to get from you a suggestion that I think is pertinent. The Government has facilities, where the builder undertakes a profiteering program, to seize his plant and go ahead with its operations; what remedy have we for the combination of labor that enters into profiteering?

Mr. STEVENS. We have none, if you mean, sir, direct action which the Government can take against labor. Where the owner of the property undertakes to hold up the Government, the Government can take the property and operate it. If there is an attempt to hold up the Government by organized labor and secure greater pay than is fair or just, I do not think it is possible to commandeer labor.

Senator HARDING. You do not think in a war emergency, when the success of the Nation is dependent on our shipbuilding program, that it would be fair or just or practicable to commandeer labor?

Mr. STEVENS. I am not saying whether it would be fair or just. I am saying, as a practical matter, I do not think it could be done; I do not think it would work satisfactorily; I do think you would get much more output under normal conditions. I do not think it is necessary. I do not think that labor had so far shown that it desires to profiteer at the expense of the Government in this war. I certainly feel that the great majority of the leaders in organized labor that I have come in contact with are very patriotic men and are doing their utmost to see that labor does its share in the war.

Senator NELSON. I would like to call your attention to this: I hold in my hand here a copy of the Industrial News Survey, British Industrial Commission Supplement, of December 5, 1917, and I want to read something from it in order to hear your views upon it [reading]:

> The British ministry of munitions, in order to acquaint the American people with Great Britain's war-time experience with labor and with the measures adopted to secure the necessary industrial support for the prosecution of war, sent to this country a commission, composed of Sir Stephenson Kent, director general of the labor-supply department, an important coal operator in England—

and then it names two or three others, among others H. W. Garrod, deputy assistant of the labor-regulation department. Now, here is

the statement of Commissioner Kent. I want to read it to you from this official publication [reading]:

The commissioners—

There were four of them [continuing]—

have visited some of the principal industrial centers of the United States, and have made a deep impression by the valuable information given and by the frankness with which they answered questions. Although they declared that they were rather unfamiliar with American industry and did not intend to give advice, they, and particularly Sir Stephenson Kent, occasionally drew parallels between conditions prevailing in Great Britain and the United States. One of the most significant remarks in this connection was made by Sir Stephenson—

Now, listen to this, every one of you [reading]—

If Great Britain had had one-eighth of the number of labor troubles in the past two years that the United States has had, my country would have had to conclude a disgraceful peace with Germany by this time. Since coming here two months ago I have noted serious strikes and threats of strikes in different parts of the United States. Not only does such a state of affairs indicate serious trouble in this country but it can not fail to affect seriously Great Britain and the other allies.

This statement was supported by Mr. Garrod, who even put the matter more plainly:

"In every city that we have visited in the United States, we have tried to put one fact of our experience before you—that no nation under modern conditions can possibly hope to carry through a great war, such as the present, unless it can maintain industrial peace at home. I say that because since we have been in this country, a matter of about two months, there have occurred a number of very serious industrial disturbances. If one-eighth of those troubles had occurred in England during the whole period of the three years that we have been at war, we should have had to make, long ago, a disgraceful peace. But that is because we are nearer the war than you are at present; but soon you are going to be very near the war indeed, and then you will come to realize that a very small part of such troubles will be sufficient.

In addition to this, Mr. Chairman, certain questions were submitted and answers to them given, and I request to have this document go into the record.

The CHAIRMAN. Without objection the document will be inserted.

(The document referred to by Senator Nelson is here printed in full, as follows:)

[Industrial News Survey—British Industrial Commission Supplement. Vol. 1, December 5, 1917, No. 40.]

SOME EXPERIENCES WITH WAR-TIME INDUSTRIAL PROBLEMS IN GREAT BRITAIN.

The British Ministry of Munitions, in order to acquaint the American people with Great Britain's war-time experience with labor and with the measures adopted to secure the necessary industrial support for the prosecution of war, sent to this country a commission, composed of Sir Stephenson Kent, director general of the labor supply department, an important coal operator in England; H. W. Garrod, deputy assistant of the labor regulation department, a member of the faculty of Oxford University; G. H. Baillie, chief technical dilution officer of the labor supply department, an English electrical engineer; Capt Cyril Asquith, director of artificer's allocation of the supply department, son of former Prime Minister of England.

The commissioners have visited some of the principal industrial centers of the United States and have made a deep impression by the valuable information given and by the frankness with which they answered questions. Although they declared that they were rather unfamiliar with American industry and did not intend to give advice, they, and particularly Sir Stephenson Kent, occasionally drew parallels between conditions prevailing in Great Britain and the United States. One of the most significant remarks in this connection was made by Sir Stephenson:

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The commission again and again emphasized the necessity of cooperation of all parties and the need for waiving prejudices, privileges, and trade customs during the war.

At the Boston meeting, on November 6, a number of questions were submitted in writing to the commissioners. The answers were brief, but clear, frank, and highly satisfactory. The following are in substance the principal questions and answers, with some additions from the commissioner's replies to similar questions on other occasions:

Q. Has the stress of war work in munitions industries caused fatigue sufficient to exert an injurious effect upon the health of workers?—A. Work in munitions factories at the beginning of the war required a work week of as many as 100 hours, and even above that, in consequence of which workers soon became worn out. Hours of labor were then gradually reduced, particularly by abolition of Sunday labor and of much overtime. To-day in the engineering trades the normal average work week is from 52 to 54 hours, with about four or five hours regular overtime, or 56 to 60 hours in all. Under these conditions there is no visible adverse effect upon the health of workers. The British workmen are warworn, but this is a mental weariness, not a bodily fatigue. It should be plaintly stated that the real obstacle in reducing overtime is not the Government nor the employers, but the men and women who want the added wages. In England there are no regulations or laws as to hours of labor. This is always dealt with by agreement between the trade-unions and the employers' federations. The only alteration that has been made during the war is that the hours which a woman might work were limited to 60 per week. There is no overtime limit for men.

Q. Has the dilution of labor by the employment of women and of many unskilled workers affected the average efficiency as compared with prewar standards?—A. Women in light and medium heavy work have proved to be even more efficient than men, while unskilled labor has been used to good account except when put on work for which much experience and skill are required. Figures were presented showing an enormous increase in output of shells and other munitions by women as compared with the average at the beginning of the war. The figures are comparative, the output for the first year being taken as a base:

	First year.	Second year.	Third year.
Very heavy howitzers	1	5	13
Heavy howitzers	1	5	27
Medium guns	1	8	[1] 6
Field guns (not over 18 pounds)	1	4	[1] 2
Shells, very heavy	1	21	220
Shells, heavy	1	6	70
Shells, medium	1	5	25
Shells, light	1	5	19

[1] This decrease in production is explained by the fact that the Government decreased its demands for these items during the third year.

At present there are over 1,000,000 women engaged in munitions work in England. Probably twenty times as many women have been trained in the plants as in the schools. The training has been given by the skilled men. It is only by their cooperation that the Government has been enabled to attain the present enormous output of munitions.

Q. What effect did the Government guarantee of piece rates have upon the output of workers and were these rates scientifically and equitably arranged?—A. It was definitely stated by a member of the commission that the great increase in output was largely due to the Government's guarantee of a continuance of high piece rates. The Government promised in the spring of 1915 that piecework rates then prevailing should not be cut and that piecework rates set in the future should be maintained during the period of the war. In consequence some rather high piecework prices are now in effect, while new piecework prices have been set with an iden of making them scientifically correct and allowing the average man an average wage. The average wage of ordinary labor in munitions factories is about £2 10s. per week. The rate for skilled tool-room workers is about 1s. to 1s. 6d. per hour. Women, in exceptional cases, make as high as £6 to £10 per week on piecework.

Q. Has there been a shortage of labor in Great Britain during the war; and if so, what measures have been taken to meet it?—A. From the outset there was a constant and decided labor shortage, and as a result there was general competition among manufacturers to "entice" labor and a prospect of ever-increasing wages. The Government, in order to stop such "enticement," empowered the ministry of munitions to regulate the distribution of labor. It can restrict the amount of labor which a given concern or industry can employ and thus virtually control it. The ministry of munitions has also enrolled the skilled workers as war munition volunteers willing to serve in munition plants wherever sent. Such workers are either paid the wage they received in their previous employment or the wage prevalent in the new employment if the latter is higher; they are also reimbursed to a limited amount if they can show that transfer from one place to another has forced them to incur additional living expense.

Sir Stephenson laid great stress on the importance of man power, stating that this was essentially a war of mechanics and that skilled mechanics were absolutely essential for war production in the shops, while machinists and semiskilled workers were sufficiently capable for repair and maintenance of mechanical equipment in the field. He added that the volunteer system adopted in Great Britain early in the war withdrew many of the finest mechanics from industry and that about 40,000 skilled workers sent to France in 1914 had to be returned to their places in the shop.

Q. What percentage of British labor was organized prior to the war and what is the percentage at the present time?—A. Between 40 per cent and 50 per cent of all labor in Great Britain was in labor unions at the beginning of the war; about 75 per cent of the workers in the munitions industry and about 80 per cent to 90 per cent of those in engineering trades and nearly 100 per cent of the workers in shipbuilding industries were organized at that time. It was explained, however, that membership in a union in Great Britain does not mean refusal to work in the same shop with nonunion workmen. Where a preponderance of employees are union workmen they merely insist that wages and conditions demanded by labor unions be also given to nonunion workers employed in the same establishment.

Q. Is it fair to say that employment of women and of many unskilled workers and abandonment of restrictive union practices has virtually changed Great Britain's industries from a closed-shop to an open-shop basis?—A. It was frankly admitted that this has been the case. By agreement with labor organizations all restrictions in respect to output, number of hours, and class of employees have been completely waived during the period of war.

Q. Is it expected that at the close of the war British labor unions will return to the restrictive practices formerly in vogue and has any agreement been entered into with the Government or with employers in respect to this?—A. By the "treasury agreement" labor organizations are pledged to abandon for the period of the war all restrictive practices and not to resist the dilution of labor by employment of unskilled labor and of women. The Government, on the other hand, has bound itself by the "treasury agreement" to permit resumption of restrictive practices of the labor unions after the conclusion of the war.

Sir Stephenson, however, expressed it as his personal conviction that before the war is over the British Government will bring employers and labor unions

together and demand that in the interest of national security they enter into a new and reasonable agreement regarding trade practices and restrictions to be effective after the war. His impression, from talking with union men, is that another agreement similar to the "treasury agreement" will be adopted. "In other words," he said, "I do not believe that trade-unions will insist on their pound of flesh."

Q. In what way has the Government prevented undue profits and exorbitant wages during the war?—A. By the "treasury agreement" of March, 1915, the profits of manufacturers were limited to not more than 20 per cent over the prewar average for two years out of three. In respect to wages the Government, with consent of the unions, decreed that the wages existing at the outbreak of the war should be maintained during the period of the war. The Government, however, promised to have the cost of living investigated three times each year; and if the cost of living was found to have materially increased, to pay to the workers a corresponding bonus in addition to their wages. This bonus is, in the first instance, paid by the employer to his employees, but the employer is reimbursed by the Government. So far three such bonuses have been paid, amounting in all to about 15 shillings per week. Sir Stephenson was particularly emphatic in pointing out that the increased cost of living is not compensated for by an increased wage, but by a governmental bonus paid in addition to the standard wage.

Sir Stephenson explained that limitation of nonessential industries was accomplished through control of raw materials and by the regulation of distribution of labor previously described. In order to secure raw materials the employer must apply to the ministry of munitions for a license, stating the purpose for which he intends to use such materials. As an instance, the ministry of munitions has allotted the steel under its control as follows:

	Per cent.
To allies	13
To shell manufacturers	24
To admiralty	21
To war office	6
To construction and steel-work extensions	8
To railways, machinery, and aircraft	17
To other civilian and miscellaneous purposes	11

All steel obtained from the United States is devoted to war purposes.

Q. Is labor in Great Britain conscripted for industrial work and how are strikes and lockouts prevented?—A. Labor is not conscripted for industrial work, but incitement to or participation in a strike or lockout is a penal offense, extreme penalty for which is life servitude. No lockout has occurred since the "treasury agreement" was entered into between employers, trade-unions, and the Government in March, 1915, and the few strikes occurring in the early period of the agreement were of minor consequence. All trade disputes are submitted to compulsory arbitration in which the Government is mediator. Sir Stephenson added that, so far as he could recall, there had not been a single strike for an advance in wages.

Great strikes have occurred only in the coal industry, but this industry is not under jurisdiction of the ministry of munitions.

Senator NELSON. Now, I desire to ask you about this matter: Is it not a fact and practically true what these gentlemen have described in this pamphlet?

Mr. STEVENS. I do not know, Senator.

Senator NELSON. Then you are not familiar with the situation in this country?

Mr. STEVENS. They make the statement that if one-eighth of the difficulties we have had occurred in England that they would have had to make a disgraceful peace. I say I do not know anything about that. It is true, as I have just stated, that there have been strikes of various kinds in the shipbuilding industry. There have been 30 plants where there was actual stoppage of work for more or less time since we have been in the war. That shows more or less labor disturbance. But we are a very much larger country than

England, have very much more varied conditions, and many more men at work. Of course, I did not discuss this matter with these gentlemen and I can not pass on their views on the subject.

Senator NELSON. How many of these shipyards are operated as union plants and how many as open shops; I mean these shipyards that you have contracts with?

The CHAIRMAN. Of the 30?

Senator NELSON. Of all these that the shipbuilding corporation have building contracts with?

Mr. STEVENS. The greater bulk of them are open shops.

Senator NELSON. They are?

Mr. STEVENS. Yes; employing both union and nonunion men.

I would like to state right here, in connection with that statement by the Englishmen, that we have a very different situation than the English. The English workers are practically entirely organized labor. When the war started over 75 per cent of all labor in England was organized. Since the war the little that was not organized has become organized. In this country we have a very large percentage of unorganized labor. It would be simpler here to deal with this situation if all our labor were organized and had been organized for a period of years, and had well established, matured labor unions in control more or less of the labor situation. It is simpler to deal with labor where it has been organized.

Senator NELSON. I know.

Mr. STEVENS. And labor which has been organized for a period of time, the older established unions, are headed by very able, patriotic, capable men. Of course, you will find some men among those—about 10 per cent of these plants actually run a closed shop; the rest are open, although in many of those open shops there are a good many union men.

Senator HARDING. Mr. Stevens, do not the unions in their contracts provide to furnish men and essentially fix their time of labor, i. e., suppose you were yourself a contractor with some branch of the shipbuilders' unions, would they have any contract with you to furnish men at so much and that those men would work six days a week?

Mr. STEVENS. A part of the closed-shop agreement is that the union shall furnish the men necessary. I never heard of any agreement that the men should work six days a week.

Senator HARDING. Then, if it is a policy of the arbitration board to meet requirements of conditions and wage, why are we called upon to pay 10 per cent more to get work done?

Mr. STEVENS. The board felt that it should do everything possible, everything that could be done, to increase the output of these plants. Some plants have had a bonus system of that kind. We felt we would try it as an experiment, to see whether we could not keep the men more continuously employed.

Senator HARDING. Is that to be the policy of the Government yards that we are building?

Mr. STEVENS. I do not know whether that will apply to the Government yards in the East or not. It will depend, I think, very largely upon the success of the plan on the Pacific coast. If it should be shown by actual results at this plant on the Pacific coast that the output of the yard has been substantially increased by pay-

ing a bonus to the men who would work a full week, it certainly would be worth trying elsewhere, because the immediate increase in production is the one thing that the board is aiming at.

Senator HARDING. Does not organized labor oppose any bonus pay?

Mr. STEVENS. They do, as a rule; yes. We do not call this a "bonus"; we call it a "war premium."

Senator NELSON. Who inspired this "war premium"? From what source did it come? Was it your recommendation?

Mr. STEVENS. It was not my personal recommendation. I do not know.

Senator NELSON. Who did it come from?

Mr. STEVENS. I do not know who suggested it, Senator. It was made somewhere within the corporation itself.

Senator NELSON. Take this California case that I referred to. They insisted on an increase of upward of 50 per cent over the 1916 schedule. They finally had a compromise. You had arbitration there, and that gave them 30 per cent, did it not?

Mr. STEVENS. Yes.

Senator NELSON. You say the increase in the cost of living was about that?

Mr. STEVENS. Yes.

Senator NELSON. On the top of that you have gone to work, through your commission, and given them 10 per cent more of a bonus, have you not?

Mr. STEVENS. We have.

Senator NELSON. In addition to that, and still they are out on a strike?

Mr. STEVENS. No; they are not on a strike in the shipyards.

Senator NELSON. The metal workers are.

Mr. STEVENS. I will tell you about that. The metal workers in other industries outside of the shipyards demanded this same 10 per cent premium, and the employers' association refused to grant it. So the strike is in the outside industries, largely private industries, for the premium.

Senator NELSON. Does not that show you, then, that the bonus you give in shipbuilding is going to affect all other industries in the country? They are going to say: "Here, Uncle Sam gives men engaged in the shipbuilding industry 10 per cent bonus. You gentlemen have got to make that up to us or we will strike." Is not that going to be the effect of it?

Mr. STEVENS. That may have some effect that way, but, still, Senator, I think it is very apparent, no matter how much the wage-adjustment boards or Government boards increase wages, that they would be increased even more, and chaos without end would exist if you left it to the individual contractors to fix wages.

Let me say this in justice to labor: A good many of the strikes and difficulties that have existed in the last six or eight months in the shipbuilding industry have grown out of increases in wages given by one company to get men away from other companies. So that there is a continual contest.

Senator HARDING. Some firm on the Pacific coast made a speedier launching than any other, yet?

Mr. STEVENS. It did.

Senator HARDING. What was the result of the wage question about that speeding-up program?

Mr. STEVENS. When the wage scale in Seattle expired this last August the unions made a demand for quite a large increase in wages. This company granted the demand; the other companies refused. Consequently they got the cream of the labor in that district. Most of the men of the other companies went out on a strike, and that particular company is the one which did turn out a ship in record time, but there is no doubt in my mind that in that particular district, as a whole, there will be less ships produced as a result of what has happened, and what we are looking for is the production of all the yards and not a record in one yard.

Senator NELSON. Was that a wooden-ship yard?

Mr. STEVENS. No; a steel yard.

The CHAIRMAN. Where were these 30 plants in which the labor trouble, generally speaking, occurred?

Mr. STEVENS. I think they were all over. I have got a list somewhere.

Senator NELSON. Can you read from the list the names of the plants in which the strikes occurred and let us know in each case what the strike was about?

The CHAIRMAN. And the location.

Senator NELSON. And the location; that is right.

Mr. STEVENS. I have here a statement which shows the plants in which strikes occurred, the dates, and the number of men out, but not the cause of the strike. It includes them all. Shall I read it over? I can furnish that later if you would like it.

The CHAIRMAN. That might go into the record, and then the other supplementary statement can come later.

Mr. STEVENS. It would be better to have this all in one statement.

Senator NELSON. It would be better to have it all in one statement there, so that you can show whether it was on account of closed shop.

Mr. STEVENS. Yes.

Senator NELSON. Whether union or closed shop, the question of wages or hours, or both.

The CHAIRMAN. Perhaps you had better withhold that and insert it later.

Mr. STEVENS. I think it would be better, and then it will be all in one statement.

(The statement referred to is here printed in full, as follows:)

In response to inquiries issued by the United States Shipping Board under date of November 19, 1917, it has received reports from 100 shipbuilding companies having contracts with the United States Shipping Board Emergency Fleet Corporation for the construction of ships; and from these reports there has been incorporated into the accompanying statement the following information: 1. Number of strikes, by plants, occurring subsequent to the creation of the Emergency Fleet Corporation and prior to December 1, 1917. 2. Dates of occurrence of same. 3. Dates of termination. 4. Number and classifications of men involved, so far as possible. 5. Cause and manner of settlement of each strike.

Thirty-seven of these companies report that they have had stoppage on Government construction due to strikes; the total number of strikes occurring in all the plants aggregating 84; the total number of men involved, 39,535; and the total number of working days lost, 587,336, or approximately 19,500 men out for 30 days.

The following table shows the number and per cent of strikes due to the various causes appearing therein:

Cause.	Number.	Approximate per cent.
Wage question	61	72
Sympathy	4	5
Wage and working conditions	2	3
No reason assigned	13	15
Unfair work	3	4
Open and closed shop and wage	1	1
Total	84	100

STATEMENT OF STRIKES OCCURRING IN PLANTS OF SHIPBUILDING COMPANIES HAVING CONTRACTS WITH THE EMERGENCY FLEET CORPORATION, SETTING FORTH THE DATES OF OCCURRENCE, DURATION, AND TERMINATION, NUMBER AND CLASSIFICATION OF MEN INVOLVED, CAUSE OF STRIKE, AND MANNER OF SETTLEMENT.

Alabama Dry Dock & Shipbuilding Co., Mobile, Ala.

August 14, 1917, 70 machinists and helpers struck; duration, four days; cause, wage question; settled by increase in pay.

August 1, 1917, 360 ship fitters and helpers struck; duration, five days; cause, wage and working conditions question; settled by increase in pay and recognition of union.

July 29, 1917, 200 laborers struck; duration, 21 days; cause settled.

Albina Engine & Machine Works, Portland, Oreg.

September 24, 1917, all men struck; duration, 29 days; cause, wage question; settled by wage adjustment board.

American International Shipbuilding Corporation, Philadelphia, Pa.

No stoppage.

American Shipbuilding Co., Brunswick, Ga.

No stoppage.

Ames Shipbuilding & Dry Dock Co., Seattle, Wash.

September 13, 1917, 70 men, lumber boycott, struck; duration, 39 days; termination, October 22, 1917; cause, wage question; settled, wage adjustment board.

September 29, 1917, to October 22, 1917, 1,630 men struck; duration, 22 days; cause, wage question; settled by wage adjustment board.

Babare Bros. Shipyard, "Old Town," Tacoma, Wash.

No stoppage.

Baltimore Drydock & Shipbuilding Co., Baltimore, Md.

September 29, 1917, to October 3, 1917, 250 carpenters and joiners struck; duration, 4 days; settled by returning to work; no concessions by companies.

November 10, 1917, 100 reamers and helpers struck; duration, one-half day; cause, wage adjustment; settled by increase in wage.

November 10, 1917, to November 12, 1917, 70 ship-fitters' helpers struck; duration, 2 days; cause, wage question; settled by increase in wage.

November 12, 1917, to November 13, 1917, 75 passer boys struck; duration, 1 day; cause, wage question; settled by increase in wage.

November 27, 1917, to November 29, 1917, 150 bolters up and helpers struck; duration, 1½ days; cause, wage question; settled by increase in wage.

Bayles Ship Yard (Inc.), Port Jefferson, N. Y.

No stoppage.

Beaumont Shipbuilding Co., Beaumont, Tex.

No stoppage.

Benicia Shipbuilding Corporation, San Francisco, Cal.

No stoppage.

Bethlehem Steel Co., Fore River plant, Quincy, Mass.

October 30, 1917, to November 6, 1917, 3,500 men struck; duration, 7 days; cause and manner of settlement not stated; class of men involved not stated.

Bethlehem Shipbuilding Corporation, Elizabeth, N. J. (Moore plant).

July 6, 1917, to October 25, 1917, 500 machine shop and shipyard men struck; duration, 3½ months, or 105 days; cause, wage question; settled by reorganization of machine shop; shipyard men returned to work without concessions.

Bethlehem Steel Co., Wilmington, Del. (Harlon plant).

August 23, 1917, 400 men, classifications not stated, struck; duration, 60 working days; cause, wage question; settled by temporary increase of 10 per cent pending adjustment of day-work and piecework schedules by labor-adjustment board.

August 24, 1917, 32 mechanics and 36 helpers struck; duration, 10 working days; cause, no demands made when men struck; settled by rehiring some of old men and recruiting new men; conditions now satisfactory in this department.

Bethlehem Shipbuilding Corporation (Union plant), San Francisco, Cal.

September 15, 1917, 8,700 men struck (classification not stated); duration, 14 days; cause, wage question; settled by temporary agreement pending adjustment by wage-adjustment board. On November 30, 1917, this plant informed the board that the wage-adjustment board had visited the vicinity and adjusted the wages; this was accepted by the employers; employees will not accept and their delegates are taking up matter with metal trades department, American Federation of Labor, Buffalo; this is latest report to date, December 27, 1917.

California Shipbuilding Co., Long Beach, Cal.

No stoppage.

Chandler, R. J., Los Angeles, Cal.

No stoppage.

Chester Shipbuilding Co., Chester, Pa.

August 21, 1917, to August 22, 1917, riveters struck (number not stated); duration, 1 day; cause, wage question; settled by increase in wages.

August 24, 1917, to August 31, 1917, bolters struck (number not stated); duration, 6 days; cause, wage question; settled by increase in wages.

October 3, 1917, to October 4, 1917, heaters struck (number not stated); duration, 1 day; cause, wage question; settled by increase in wages.

October 22, 1917, to October 25, 1917, light sheet-metal workers struck (number not stated); duration, 3 days; cause, wage question; settled by increase in wages.

October 17, 1917, to October 30, 1917, crane runners struck (number not stated); duration, 13 days; cause, wage question; settled by increase in wages.

November 15, 1917, to November 20, 1917, ship fitters struck (number not stated); duration, 5 days; cause, wage question; settled by increase in wages.

November 19, 1917, to December 1, 1917, machinists struck (number not stated); duration, 10 days; cause, wage question; settled by increase in wages.

Coast Shipbuilding Co., Portland, Oreg.

Not reported.

Columbia River Shipbuilding Corporation, Portland, Oreg.

September 24, 1917, to October 22, 1917, 1,336 men (classifications not stated); duration, 24 working days; cause, wage question; settled by wage adjustment board.

Coos Bay Shipbuilding Co., Marshfield, Oreg.

No stoppage.

Fulton Shipbuilding Co., Wilmington, Cal.

No stoppage.

Craig Shipbuilding Co., Long Beach, Cal.

No stoppage.

Cramp, Wm., & Sons, Ship & Engine Building Co., Philadelphia, Pa.

Duration.	Working days lost.	Class of workers.	Men involved.
Jan. 2-3	1	Ship fitters and helpers	255
Feb. 10-28	16	Power and plant helpers	169
Feb. 24-27	3	Chipping and calking quartermen	8
Feb. 26-Mar. 12	12	Acetylene cutters	20
Feb. 28-Mar. 6	6	Laborers	67
Do	6	Coke handlers	5
Feb. 28-Mar. 3	3	Stage builders	20
Do	3	Rivet heaters and passers	170
Do	3	Chippers and calkers	95
Mar. 5-9	4	Iron-foundry men	280
Apr. 18-20	2	Stage builders' helpers	30
May 2-28	24	Outside machinists, pipe fitters, and helpers	250
May 14-31	16	Ship carpenters and joiners	256
July 23-26	3	Rivet passers	80
July 24-Aug. 20	23	Coppersmiths	50
Aug. 6-14	7	Laborers	130
Sept. 6-8	2	Chipping and calking and rivet quartermen	16
Sept. 25-26	1	Furnace men	40
Oct. 10-12	2	Engineers and crane operators	90
Oct. 10-29	17	Painters	130
Nov. 7-9	2	Machine-shop apprentices	35

Cause of the foregoing strikes, question of wage. "In all cases strikes were settled by conference with committees of workmen, and compromises satisfactory to them were effected."

Cumberland Shipbuilding Co., Portland, Oreg.
No stoppage.

Daniels, Oscar, Co., Woolworth Building, New York City.
No report.

Dantzler Shipbuilding & Drydock Co., Moss Point, Miss.
No stoppage.

Dierks-Blodgett Shipbuilding Co., Kansas City, Mo.
No stoppage.

Downey Shipbuilding Corporation, New York.
No report.

Duthie, J. F., & Co., Seattle, Wash.
No report.

Erickson Engineering Co. (Inc.), New York City.
No report.

Feeney & Bremer, Tillamook, Oreg.
No stoppage.

Foundation Company, Woolworth Building, New York City.
November 12, 1917, 125 men struck (classification not stated); duration, 1 day and a half; cause, wage question; settled by men returning to work.

Freeport Shipbuilding Co., Freeport, Me.
No stoppage.

Gilchrest, Geo. A., Thomaston, Me.
No stoppage.

Grays Harbor Motor Ship Corporation, Seattle, Wash.
July 28, 1917, to August 27, 1917, 225 men struck (classification not stated); duration, 30 days; cause, sympathy; settled (not stated).

Gildersleeve Ship Construction Co., Gildersleeve, Conn.
No stoppage.

Globe Shipbuilding Co., Superior, Wis.
Date and termination of strike not stated. Forty men struck (classification not stated); duration, two days; cause, wage and working conditions; settled by agreement to pay overtime after eight hours and increased wages.

Grant Smith-Porter-Guthrie Co., Portland, Oreg.
September 15, 1917, 600 men struck (classification not stated); duration, 30 working days; cause, wage question; settled by Wage Adjustment Board.

Great Lakes Engineering Works, Detroit, Mich.
No stoppage.

Groton Iron Works, 50 Broad Street, New York City.
No stoppage.

Hammond Lumber Co., San Francisco, Cal.
No stoppage.

Hampton Roads Dry Dock & Shipbuilding Corporation, Norfolk, Va.
No stoppage.

Hanlon Dry Dock & Shipbuilding Co. (Inc.), Oakland, Cal.
September 17, 1917, to October 1, 1917, 400 men struck (classification not stated); duration, 14 days; cause, wage question; settled by Wage Adjustment Board.

Heidenfels Bros., Beeville, Tex.
No stoppage.

Hillyer-Sperring-Dunn Plant, Jacksonville, Fla.
No stoppage.

Hodge Ship Co., Moss Point, Miss.
No stoppage.

Housatonic Shipbuilding Co. (Inc.), Stratford, Conn.
No stoppage.

Jahncke Shipbuilding Co., New Orleans, La.
No stoppage.

Johnson Shipyards Corporation, 2941 Richmond Ter. M. H. S. I., New York.
No stoppage.

Kelly Atkinson Construction Co., Security Building, Chicago, Ill.
No stoppage.

Kingston Shipbuilding, Kingston, N. Y.
No stoppage.

Kruse & Banks Shipbuilding Co., North Bend, Oreg.
No stoppage.
Lone Star Shipbuilding Co., Beaumont, Tex.
No stoppage.
Los Angeles Shipbuilding & Drydock Co., Los Angeles, Cal.
No report.
McBride & Law, Beaumont, Tex.
October 26, 1917, to October 27, 1917, inclusive, 115 men struck (classifications not stated); duration, day and a half; cause, wage question; settled by men coming back at old wage scale.
McCammon, J. M., Houston, Tex.
No report.
McDougall Duluth, Duluth, Minn.
No stoppage.
McEachern Ship Co., Portland, Oreg.
No report.
Manitowoc Shipbuilding Co., Manitowoc, Wis.
No stoppage.
Maryland Steamship Co., Lexington Bldg., Baltimore, Md.
No stoppage.
Meacham & Babcock Shipbuilding Co., Seattle, Wash.
No stoppage.
Merchant Shipbuilding Corporation, Finance Building, Philadelphia, Pa.
No stoppage.
Merrill Stevens Co., Jacksonville, Fla.
No stoppage.
Midland Bridge Co., Kansas City, Mo.
No stoppage.
Mobile Shipbuilding Co., Mobile, Ala.
No stoppage.
Moore & Scott Iron Works, Oakland, Cal.
February 15, 1917, 250 heater boys in riveting department threatened to strike; cause not stated.
March 3, 1917, to March 17, 1917, 1,800 laborers and bolters up struck; duration, 12½ working-days; cause not stated; settlement not stated.
May 24, 1917, 300 men (boiler makers) struck; duration, not stated; cause, men refuse to work on boilers constructed by Willamette Iron Works, of Portland, Oreg., claiming work unfair, this yard being an open shop. Settled by meeting a Boilermakers' Union of Local 6.
September 15 to October 1, 1917, 2,500 men (classifications not stated) struck; duration, 12 working-days; cause, wage question; settled by temporary agreement pending adjustment by wage adjustment board.
On October 22, 1917, machinists (number not stated) struck; duration, 1 day; cause, refused to work on boilers constructed by Willamette Iron Works; settlement not stated.
On November 3, 1917, riggers (number not stated) struck; duration, 1 day; cause, unfair work; settlement not stated.
October 26, 1917, 500 heater boys struck; duration, 1 day; cause, discharge of one of the boys for loafing; sympathetic strike; settled when union advised of state of affairs.
Moore & Scott Iron Works, San Francisco, Cal.
No report.
Morey & Thomas, 1212 Chemical Building, St. Louis, Mo.
No stoppage.
Murnan Shipbuilding Corporation, 836 Commercial Trust Building, Philadelphia, Pa.
No stoppage.
National Shipbuilding Co., Orange, Tex.
September 24, 1917, strike at Yellow Pine Paper Mill which furnishes steam to above company; duration, three days; cause, not stated; settled by arranging to furnish own steam.
Newburgh Shipyards (Inc.), Newburgh, N. Y.
No stoppage.
Newcomb Lifeboat Co., Hampton, Va.
No stoppage.
New Jersey Shipbuilding Co., Gloucester, N. J.
November 21, 1917, 51 common laborers struck; duration, three days; cause, wage and hour question; settled by men returning to work at old wage scale.

November 21, 1917, plumbers (number not stated) struck; duration, three days; cause, demanded an additional hour of pay; settled by men returning to work at old wage scale.

Newport News Shipbuilding & Drydock Co., Newport News, Va.

May 29, 1917, to June 4, 1917, 420 men (classifications not stated) struck; duration, six days; cause, wage question; settled by increase effective May 29, 1917.

New York Shipbuilding Corporation, Camden, N. J.

No stoppage.

Nilson & Kelex Shipbuilding Corporation, Seattle, Wash.

No stoppage.

North Carolina Shipbuilding Co., Morehead City, N. C.

No stoppage.

Patterson-McDonald Shipbuilding Co., Seattle, Wash.

No report.

Peninsula Shipbuilding Co., Portland, Oreg.

September 15, 1917, to October 23, 1917, 575 men struck (classifications not stated); duration, 30 days; cause, wage question; settled by wage adjustment board.

Pennsylvania Shipbuilding Co., Gloucester, N. J.

No report.

Portland Ship Ceiling Co., Portland, Me.

No report.

Potomac Shipbuilding Co., Colorado Building, Washington, D. C.

No stoppage.

Pusey & Jones Co., Wilmington, Del.

October 7 to October 11, 1917, inclusive, 250 boat-yard men struck; duration, four days; cause, not stated; settlement not stated.

Riebolt, Wolter & Co. Shipbuilding, Sturgeon Bay, Wis.

No stoppage.

Rodgers, Geo. F. & Co., Astoria, Oreg.

No stoppage.

Saginaw Shipbuilding Co., Saginaw, Mich.

No report.

Sanderson & Porter Plant, Raymond, Wash.

The report from this company is as follows: "No direct stoppage, but delayed by lumber and sawmill strikes in July, August, and September, 1917."

Sandy Point Shipbuilding Corporation, Sandy Point, Me.

No stoppage.

Seaborn Shipyards, Seattle, Wash.

No report.

Seattle Construction & Drydock Co., Seattle, Wash.

July 29, 1917, to August 3, 1917, 300 men (classifications not stated) struck; duration, five days; cause not stated; settlement not stated.

September 14, 1917, to October 22, 1917, 275 men struck (classifications not stated); duration, 34 days; cause, 8-hour day demanded; settled and strike declared off.

September 29, 1917, to October 22, 1917, 3,200 men struck (classifications not stated); duration, 20 days; cause, wage question; settled by Wage Adjustment Board.

This further statement appears in connection with the date, duration, number of men involved, etc.: "October 28, November 4, November 11, 2,000 men each (duration of working days lost, 6,000)."

Shattuck, L. H. (Inc.), Manchester, N. H.

No stoppage.

Ship Construction & Trading Co., 50 Broadway, New York City.

No report.

Skinner & Eddy Corporation, Seattle, Wash.

No report.

Sloan Shipyard Corporation, Seattle, Wash.

August 1, 1917, 350 men (classifications not stated) struck; duration, three days; cause, wage question; settled by Wage Adjustment Board.

November 1, 1917, 400 men (classifications not stated) struck; duration, nine working days; cause, wage question; settled by Wage Adjustment Board.

Smith & Sons Co., Baltimore, Md.

No report.

Sommarstrom Shipbuilding Co., San Francisco, Cal.
September 15, 1917, to October 16, 1917, 48 men struck (classifications not stated); duration, 30 days; cause, wage question; settled by Wage Adjustment Board.
Southern Dry Dock & Shipbuilding Co., Orange, Tex.
No stoppage.
Standard Shipbuilding Co., New York City.
No report.
Standifer, G. M., Construction Corporation, Vancouver, Wash.
September 15, 1917, to October 22, 1917, 173 men struck (classifications not stated); duration, 33 days; cause, wage question; settled by Wage Adjustment Board.
Staten Island Shipbuilding Co., Port Richmond, N. Y.
July 31, 1917, to August 31, 1917, 1,000 men struck (classifications not stated); duration, 30 days; cause, wage question; settled by increase in wages.
St. Helens Shipbuilding Co., St. Helens, Oreg.
June 1, 1917, 60 men struck (classifications not stated); duration, 4 days; cause, wage question; settlement not stated.
September 15, 1917, 20 men struck (classifications not stated); duration, 75 days; cause, wage question; settled by wage adjustment board.
Submarine Boat Corporation, New York City.
October 15, 1917, 15 plumbers and roofers of subcontractors struck in sympathy; job manner and finished open shop.
November 6, 1917, 50 pile drivers struck; duration, 6 days; cause, sympathy; settled by men returning to work under former conditions.
Sun Shipbuilding, Chester, Pa.
No stoppage.
Supple & Ballin, Portland, Oreg.
September 15, 1917, to October 23, 1917, 450 men struck (classifications not stated); duration, 34 days; cause, wage question; settled by wage adjustment board.
Tampa Dock Co., Tampa, Fla.
No stoppage.
Tampa Engineering Co., Tampa, Fla.
During June, 1917, 300 men struck (classifications not stated); duration, 3 days; cause, wage question; settlement not stated.
Terry Shipbuilding Corporation, Savannah, Ga.
July 26, 1917, 80 per cent of white carpenters struck; duration, 3 days; cause, company would not discharge negro carpenter; settled by men returning to work.
Texas Steamship Co., Bath, Me.
No stoppage.
Toledo Shipbuilding Co., Toledo, Ohio.
No stoppage.
Todd Dry Dock and Construction Corporation, Tacoma, Wash.
No stoppage.
Union Bridge & Construction Co., Morgan City, La.
No stoppage.
Universal Shipbuilding Co., Houston, Tex.
No stoppage.
United States Maritime Corporation, Brunswick, Ga.
No stoppage.
Western Pipe & Steel Co., San Francisco, Cal.
September 15, 1917, 95 men struck (classifications not stated); duration, 15 days; cause, wage question; settled by wage adjustment board.
Willamette Iron and Steel Work and Northwest Steel Co., Portland, Oreg.
No stoppage.
Wilson Shipbuilding Co., Astoria, Oreg.
September 15, 1917, to October 23, 1917, 153 men srtuck (classifications not stated); duration, 35 days; cause, wage question; settled by wage adjustment board.
Wrights Shipyards, Tacoma, Wash.
August 23, 1917, 40 men struck. (This is the full report.)
York River Shipbuilding Corporation, West Point, Va.
No stoppage.

Senator HARDING. Is it not a fact that every controversy has been one of wage?

Mr. STEVENS. Practically every one, yes. Of course, I would like to point out that the difficulties of this labor situation are far beyond the power of any one department to deal with. For instance, the Navy has large contracts outstanding, a great many of them on the cost plus basis: the Army has contracts for supplies of various kinds that run into the billions; the Shipping Board Fleet Corporation has enormous contracts out. Those different departments are all drawing more or less from the same classes of labor. If contractors who have Army contracts at the cost plus 10 per cent advance wages much above those which prevail in that district or prevail in our shipyards, they would draw men from our shipyards and disrupt our business; on the other hand, if we should advance wages in the shipyards substantially above those in the navy yards and in the munition plants, we would interfere with other important Government work. There must be worked out some uniform labor policy for all war work, and that matter has been under serious consideration by the different departments and is being considered now by the Council of National Defense. We realize that we can not deal with our labor problem alone without crossing wires and interfering with and running into other departments.

Senator JONES. Ought not the Department of Labor handle all that?

Mr. STEVENS. That is a rather serious question.

Senator JONES. You ought to have some one at the head of that, ought you not?

Mr. STEVENS. There should be some central policy and some central administration of that policy. Whether it ought to be left entirely to the Department of Labor is a difficult question. For instance, the Shipping Board itself or the Shipping Corporation has a great deal more power in the situation than the Department of Labor has. The men who go out from the Department of Labor to act as mediators in a strike have no authority and power over either of the parties to the controversy. The Shipping Board, when it undertakes to mediate a labor difficulty, does have a pretty complete control over one of the parties to the controversy.

Senator JONES. And certainly you ought to use your power in conjunction with the central authority?

Mr. STEVENS. Yes.

Senator JONES. I do not mean that the central authority ought to be entirely decisive.

Mr. STEVENS. I think myself it should be done by cooperation of the various departments and the Department of Labor.

Senator NELSON. Mr. Stevens, if you will allow me, what would you have to suggest to remedy the labor situation for the future so that we can expedite the shipbuilding? What remedy do you suggest to stop strikes and stop these delays and have the work proceed at fair and reasonable rates?

Mr. STEVENS. On the question of strikes and continuous employment, I doubt very much whether there is any legislation which is required. I think more can be done by voluntary cooperation between the Government, the contractors, and labor than can be done by any form of compulsory arbitration or conscription, and the

efforts which have already been made by our department and other departments——

Senator NELSON. Let me ask you one question: You and I, if we are not too old, could be conscripted for war service and they could make soldiers of us, could they not?

Mr. STEVENS. Yes.

Senator NELSON. If the country has a right to our services as soldiers, would not the country have the right to our services in the shipbuilding industries, too?

Mr. STEVENS. Theoretically that is perfectly sound.

Senator NELSON. Is not that morally so, too, and legally?

Mr. STEVENS. I have no doubt it can be made legally so.

Senator NELSON. Is it not morally so?

Mr. STEVENS. It is morally so and theoretically so. I do not think it is humanly so. There is a great difference of sentiment existing among the people toward military service under compulsion and compulsory labor in private plants, owned by private corporations, and I feel certain of this—no matter what labor difficulties we have had in the past, no matter how many labor difficulties we may have in the future—that we will get more production out of American labor free than we will under any system of compulsion, and I think as a whole the labor men and labor leaders are trying to do their bit in this war.

Senator NELSON. I am glad to hear you say so.

Mr. STEVENS. And I feel about this matter of harmony and feel that the efforts which we have already made—these different agreements for voluntary arbitration—have worked in the short time they have been in effect well enough so that we all have a strong hope and confidence that the general run of difficulties can be settled during the war by these voluntary arrangements between organized labor and the Government.

Senator BANKHEAD. Do all your contracts call for 10 per cent plus?

Mr. STEVENS. No, sir.

Senator BANKHEAD. A great many of them do?

Mr. STEVENS. No, sir; we have very few.

Senator BANKHEAD. You have some, then?

Mr. STEVENS. I do not know how many, but I do not think there are a half dozen 10 per cent contracts now.

Senator BANKHEAD. That is the general rule in these Government contracts, is it not, outside of the shipbuilding, we will say?

Mr. STEVENS. I understand that the Navy contracts are on a 10 per cent plus basis.

Senator BANKHEAD. Are not all these cantonment contracts let on that basis?

Mr. STEVENS. A great many were.

Senator BANKHEAD. What I want to know is this: If you have that clause in your contracts now what difference does it make to the contractor what he pays for labor or material?

Mr. STEVENS. It does not make very much difference. It is an inducement to the contractors to bid up wages.

Senator BANKHEAD. Would he not just as soon pay $5 a day as $4, so far as he is concerned, as he would pay that and get the 10 per cent?

Mr. STEVENS. He would have to pay what he would have to to get the labor. We have let almost no contracts of that kind.

Senator SHERMAN. I understood from Mr. Hurley the other day that you had let none.

Mr. STEVENS. There may have been a very few at first.

Senator SHERMAN. I would like to know definitely whether there have been any or none.

Mr. STEVENS. There are none.

Senator BANKHEAD. I was under the impression from you and Mr. Hurley that you had made contracts of that sort, as everybody else had made.

Mr. STEVENS. I know at the start there was some talk around concerning the board that our contracts would be on cost plus 10 per cent. I know that was immediately abandoned. I think there may have been a few contracts of that kind let.

Admiral BOWLES. We have contracts on the cost plus fee, but none on the straight cost percentage.

Senator CALDER. Is not that the same as cost plus a fee?

Mr. STEVENS. No; there is some difference. In a cost plus 10 per cent the more it costs the more the contractor gets. He not only gets what he pays out, but 10 per cent on the cost of the ship. On the cost plus a fee he gets the same fee no matter what the ship costs. The Government has to pay the labor, which we will suppose is $20,000 a hull. It is almost impossible to get contractors to take a fixed flat amount without any cost plus. If every contractor knew the cost, there might be no limit to where materials and labor would go. The future is so uncertain that the cost plus or cost plus fee or some protection of that kind is necessary.

Senator CALDER. On what basis are the cost plus fee contracts; do you know?

Mr. STEVENS. I do not know. I think our statement will show.

Admiral BOWLES. I will bring the analysis of all contracts here this afternoon; that will show you exactly.

Senator HARDING. We have got on a very interesting question to me here. I want to ask you, first assuring you that we have not been trying to criticize your policy of dealing with the labor situation, but trying to learn something concerning it, and very naturally this committee is just as cordially in favor of a free labor, as you call it, as the board is, but where do you think we are going to arrive, assuming that you allow a 10 per cent bonus to secure continuous labor, and then the collateral industrial strike for the same bonus, and with governmental contracts providing for adjustment with a grant of 10 per cent bonus to the collateral industries, and then somebody collateral to them strikes for the same bonus, where are you going to get with this wage proposition?

Mr. STEVENS. If that went on we would get a pretty general 10 per cent premium. Whether or not it becomes general will depend entirely upon the results that it shows on the Pacific coast, where we have it in effect. If it produces with the same number of men a greater output, it will justify itself; if it does not, it will be dropped. It is an experiment for the present, an attempt to see whether something can not be done to speed up the production.

Senator HARDING. Is this 10 per cent bonus you speak of limited to the Pacific coast?

Mr. STEVENS. It has not been put into effect on the Atlantic coast, to my knowledge, the last I knew of it. You know I have been away down in the chairman's country.

Senator BANKHEAD. Is it not likely, you having put that 10 per cent bonus into operation on the Pacific coast, that your labor on the Atlantic coast will demand the same thing, and why should they not?

Mr. STEVENS. We did not find that labor was at all eager about that bonus.

Senator BANKHEAD. You did not find what?

Mr. STEVENS. We did not find that labor was at all eager about that bonus. That suggestion of a premium was not made by the labor men at all. It was made by our department in an attempt to get greater production. As a rule labor unions are opposed to premiums and bonuses, so I do not think there will be any general demand on the part of labor for that purpose.

Senator BANKHEAD. You could not complain if there was, under the circumstances, could you?

Mr. STEVENS. No; under the circumstances we could not.

Senator CALDER. Could you not say that 10 per cent bonus was to become a general increase after February 1?

Mr. STEVENS. After February 1; yes. There has been quite a little increase in the cost of living since the wage was established.

Senator JONES. This bonus is paid by the Government itself and not by the shipbuilders?

Mr. STEVENS. It is paid, in the first instance, by the shipbuilders and added to the cost of the ship. It is really paid by the Government.

Senator JONES. It is really paid by the Government, and the Government proposed to pay it. The shipbuilders did not propose it, did they?

Mr. STEVENS. No.

Senator JONES. The Government proposed it?

Mr. STEVENS. The Government proposed it.

Senator JONES. And so the Government pays it?

Mr. STEVENS. Yes.

The CHAIRMAN. Ten per cent above a scale agreed on in 1916, I believe?

Mr. STEVENS. They added to the scale of 1916 31 per cent to cover increased cost of living since that date, and then they added a 10 per cent bonus as a special inducement to the men to put in continuous work to speed up production.

Senator NELSON. That means 40 per cent over the 1916 schedule, does it not?

Mr. STEVENS. Yes; it does.

The CHAIRMAN. When has the scale been settled, if settled at all, on the Atlantic coast or brought down to a date later than 1916?

Mr. STEVENS. The conditions on the Atlantic coast are very much different from those on the Pacific coast. You will find some plants that have had agreements for a year; you will find some plants which have not had any agreement at all. There is a constant oscillation of wages up and down the coast. It will be difficult to take any particular time on the Atlantic coast from which to figure.

The CHAIRMAN. How about the Gulf—has there been any trouble there at all?

Mr. STEVENS. The scale of wages on the Gulf has generally been lower than that on the Atlantic or on the Pacific coast, and when the Wages Adjustment Board fixed a scale for the Pacific coast, and when the Navy came out with a new scale for all navy yards, effective November 1, and showing a substantial increase there was evidence of a pretty general demand on the part of labor on the Gulf and elsewhere to get the same wages as were being paid in other parts of the country, and demands have come in from the Gulf.

The CHAIRMAN. From what date to what date have these losses in time occurred, Mr. Stevens? You gave us the number of days. I would like to know from what date to what date.

Mr. STEVENS. That was from the time we went into the war down to just recently, down to date.

Let me make this statement, that the Navy, of course, has navy yards scattered up and down the Atlantic coast from Portsmouth, N. H., to the Gulf. They have been in the habit of having a semi-annual wage-scale adjustment, which was agreed upon by some arbitration board representing the Navy and representing organized labor. Last November the Navy put into effect a new scale in all the navy yards on the Atlantic coast, which was a substantial increase over the old scale then prevailing in the navy yards, and in most instances an increase over the scale of wages prevailing in districts in other industries outside. The Shipping Board had adopted that Navy scale as its scale of wages for the Atlantic coast and notified all contractors that they were at liberty to put in the scale of the nearest navy yard.

Senator HARDING. Do you happen to have at your tongue's end the comparison of that shipbuilding scale with the west coast shipbuilding scale?

Mr. STEVENS. I have not. The navy-yard scale, of course, covered 40 or 50 different skilled trades in the navy yards.

Senator HARDING. In a general way, what is the result of the comparison, if you have that in mind?

Mr. STEVENS. I can not say whether the wage scale adopted on the Pacific coast by the wage-adjustment board was higher than the Navy scale on the Atlantic coast or not. I think it was a little higher; that is my impression.

Senator HARDING. Then they get the 10 per cent for working?

Mr. STEVENS. Yes.

Senator NELSON. Now, Mr. Stevens, what is the total amount in dollars and cents of the building contracts that are outstanding?

Mr. STEVENS I could not say, Senator.

Senator NELSON. Can any of you tell?

Can you, Admiral Bowles, say how many million dollars it would take to pay these contracts outstanding?

(After a pause.)

Senator JOHNSON. While looking for that let me ask you, have you entered into a different agreement with the labor employment on the Pacific coast?

Mr. STEVENS We had an agreement signed by national presidents of all those unions to accept the award of this adjustment board.

Admiral BOWLES. The total amount to about $1,300,000,000.

Senator NELSON. Let me ask you, in connection with that, if I am correct in understanding that only about 19 per cent of the aggregate building contracts are completed, or how many per cent are completed?

Admiral BOWLES That is about right.

Senator NELSON. Then, this 10 per cent bonus amounts to a 10 per cent increase on over $1,000,000,000?

Admiral BOWLES. I should say the total amount of building contracts is $1,300,000,000; labor represents a little more than half.

Senator NELSON. Labor represents a little more than half?

Admiral BOWLES. That would be $650,000,000 for labor.

Senator NELSON. So that your bonus of 10 per cent that you have given them increases the cost of the shipping to the United States upward of $60,000,000; is that correct?

Admiral BOWLES. Sixty-five million.

Mr. STEVENS. If they all get it it does; they won't all get it.

Senator HARDING. They will not all get in six days' continuous work.

Senator CALDER. Most of them will get it?

Mr. STEVENS. We hope that it will increase the number of men who will get in a continuous week's work, but they will not all get it by a good deal.

Senator CALDER. I want to say that I hope they all work six days so they will all get it.

Mr. STEVENS. So do we.

Senator CALDER. That means more ships.

Mr. STEVENS. That will mean more ships.

Senator NELSON. I hope they will work six days and three shifts.

The CHAIRMAN. What have you to say as to the present situation regarding labor? Are there any disturbances pending now or matters of controversy going on?

Mr. STEVENS. Things are going pretty harmoniously now.

Senator JOHNSON. In the contracts you have entered into, do you not provide a mode of settlement of disputes, with a right of appeal and the like?

Mr. STEPHENS. The contracts merely provide that the contractors must obey the instructions which the corporation gives to them concerning labor and the conditions of labor. We have no contract which binds them to accept any arbitration, but, of course, we can always order them to pay whatever an arbitration board decides. Then, we have an agreement directly with the officials of the unions. directly with the Government, with the Shipping Board, and with the Secretary of the Navy that they, on their part, will submit differences to this adjustment board and will work pending its decision and be bound by its decisions. Of course, that agreement has only a moral effect it is good only in so far as the labor union organizations can influence the local men to live up to it.

Senator JOHNSON. It has been made with the various union labor organizations?

Mr. STEVENS. It has.

Senator JOHNSON. And in your opinion it will be kept?

Mr. STEVENS. In general, it will be kept.

Senator JOHNSON. In great degree it solves your difficulties, does it not?

Mr. STEVENS. Yes.

Senator HARDING. Do you say that is an agreement, or is it just a stated policy?

Mr. STEVENS. That is an agreement.

Senator JONES. It does not make any difference to the shipbuilder how much increase you order, because you make good whatever you order him to pay?

Mr. STEVENS. Yes.

The CHAIRMAN. Is there an adequate supply of labor now to enable the yards to run on full time?

Mr. STEVENS. There is some shortage at the present time, but not any real serious shortage.

Senator HARDING. Mr. Stevens, just as a matter of fairness, I want to clear this up a little bit. You say you have an agreement that these matters will be submitted and adjusted with the Government. There are many thousands of Government employees who have the wage question very much in mind just now, and that can not be adjusted, except by an appropriation by Congress which specifically provides the increase of pay, yet you have a contract with the union heads that you can adjust their pay at any time or will take it up and adjust it out of the appropriations you have?

Mr. STEVENS. No; we have this: We have an agreement with the heads of the unions that any disputes concerning wages or conditions of labor that arise between the men and their employers, which can not be settled between the men and the employers, shall be submitted to the decision of an arbitration board. We have that agreement, for instance, with the longshoremen, where the Government is only indirectly interested in what the longshoremen get. We want ships to be handled as quickly as possible. We therefore want no strikes of longshoremen. Hence, we have an agreement with the longshoremen and the ship companies, a three-cornered agreement—the ship companies and the officials of the union agree with the Shipping Board that during the war they will accept the decision of our arbitration board in case of strike.

Senator HARDING. You had a written contract to that effect?

Mr. STEVENS. Yes; signed by the President of the International Longshoremen's Union.

Senator JOHNSON. At your convenience, will you insert that agreement in the record?

Mr. STEVENS. I will put in copies of all our agreements.

(The copies of agreements referred to are here printed in full, as follows:)

AGREEMENT FOR THE ADJUSTMENT AND CONTROL OF WAGES, HOURS, AND CONDITIONS OF LABOR IN THE LOADING AND UNLOADING OF VESSELS ON THE ATLANTIC, GULF, AND PACIFIC COASTS.

For the adjustment and control of wages, hours, and conditions of labor in the loading and unloading of vessels, there shall be created a national adjustment commission, located in Washington, D. C., comprised as follows: One member nominated by the Shipping Board; one nominated by the Secretary of War; one nominated by the International Longshoremen's Association; one nominated by the committee on shipping of the Council of National Defense, to represent the coastwise carriers and to act only in cases involving coastwise service; one nominated by the committee on shipping of the Council of National Defense, to represent carriers engaged in foreign trade, and to act only in cases involving foreign service.

The national adjustment commission shall appoint in each important port a local adjustment commission, comprised as follows: One member to represent the Shipping Board and War Department; one to represent the International Longshoremen's Association, nominated by the International Longshoremen's Association; one to represent the carriers in foreign trade, nominated by the committee on shipping of the Council of National Defense, and to act only in cases involving foreign service; one nominated by the committee on shipping of the Council of National Defense, to represent carriers engaged in coastwise trade, and to act only in cases involving coastwise trade.

The union scale of wages, hours, and conditions in force August 1, 1917, in said port shall be adopted as the basic standard with reference to each such port.

All differences which may arise in any particular port shall be adjusted by the local commission if possible. In case either party is dissatisfied with the decision of the local commission it may appeal to the national commission for a review.

In case of expiration of any agreement as to scale of wages, hours, and conditions now in force, the national commission shall adjust the new scale of wages, hours, and conditions, provided an agreement can not be reached by the employers and the union.

Consideration shall be given to special circumstances, if any, arising after said date of August 1 or after the acceptance of a new scale of wages, hours, and conditions, which may require particular advances in wages or changes in other standards.

In all cases work shall continue uninterruptedly pending the action of any local commission or the decision of the national adjustment commission.

All adjustments of wages, hours, and conditions made by the national commission shall be binding on all parties.

The commission shall adopt rules of procedure and shall construe the meaning of this agreement and any ruling made by it thereunder.

R. B. STEVENS.	P. A. S. FRANKLIN.
NEWTON D. BAKER.	D. T. WARDEN.
WILLIAM B. WILSON.	FRANK C. MUNSON.
WALTER LIPPMANN.	L. SHEARMAN.
T. V. O'CONNOR.	H. H. RAYMOND.
SAMUEL GOMPERS.	ERNEST M. BULL.

The undersigned employers on the Pacific coast hereby agree to the following modification of this agreement, namely, that any disputes between the employers and employees not settled locally between themselves shall be referred to the national adjustment commission, whose decision shall be final, and accepted by the undersigned, and during the commisson's deliberations work shall continue uninterruptedly.

AGREEMENT FOR THE ADJUSTMENT AND CONTROL OF WAGES, HOURS, AND CONDITIONS OF LABOR IN THE LOADING AND UNLOADING OF VESSELS.

For the adjustment and control of wages, hours, and conditions of labor in the loading and unloading of vessels, there shall be created a central adjustment commission, located in Washington, D. C., comprised as follows: One member nominated by the Shipping Board, one nominated by the Secretary of War, one nominated by the International Longshoremen's Association, one nominated by the committee on shipping of the Council of National Defense to represent the coastwise carriers and to act only in cases involving coastwise service; one nominated by the committee on shipping of the Council of National Defense to represent carriers engaged in foreign trade and to act only in cases involving foreign service; one nominated by the Package Freight Carriers on the Great Lakes and to act only in cases involving service on the Lakes.

The central adjustment commission shall appoint in each important port a local adjustment commission, comprised as follows:[1] One member to represent the Shipping Board and War Department, one to represent the International Longshoremen's Association, nominated by the International Longshoremen's Association; one to represent the carriers in foreign trade, nominated by the committee on shipping of the Council of National Defense, and to act only in cases

[1] It is suggested only three local commissions necessary on the Great Lakes—one to cover Lake Erie, one to cover Lake Michigan, and one to cover Lake Superior.

involving foreign service; one nominated by the committee on shipping of the Council of National Defense to represent the carriers in coastwise trade and on the Great Lakes; one nominated by the Package Freight Carriers on the Great Lakes.

1. The scale of wages, hours, or conditions in force at the various terminals in each port on August 1, 1917, shall be adopted as the standard with reference to each such terminal.

2. All differences which may arise in any particular port shall be adjusted by the local commission having jurisdiction, if possible. In case either party is dissatisfied with the decision of the local commission it may appeal to the central commission for a review.

3. In case of the expiration of any agreement as to the scale of wages, hours, or conditions now in force and provided an agreement can not be reached by the employers and their labor it must be referred to the local commission who shall endeavor to bring about an adjustment; if they are are unsuccessful, the central commission shall adjust the new scale of wages, hours, or conditions.

4. Consideration shall be given to special circumstances, if any, arising after said date of August 1, or after the acceptance of a new scale of wages, hours, or conditions which may require particular change in wages or in other standards.

All adjustments of wages, hours, or conditions made by the central commission shall be binding on all parties.

The central commission shall adopt rules of procedure and shall construe the meaning of this agreement and any ruling made by it thereunder.

SHIPPING BOARD.
SECRETARY OF WAR.
LONGSHOREMEN'S ASSOCIATION.
SHIPPING COMMITTEE.
SECRETARY OF LABOR.
MR. GOMPERS.

MEMORANDUM FOR THE ADJUSTMENT OF WAGES, HOURS, AND CONDITIONS OF LABOR IN SHIPBUILDING PLANTS.

When disputes arise concerning wages, hours, or conditions of labor, in the construction or repair of shipbuilding plants or of ships in shipyards under the United States Shipping Board Emergency Fleet Corporation, or under said Shipping Board, or under contract with said corporation or with said board, adjustment of such disputes shall be subjected to an adjustment board of three persons, hereinafter called "the board" to be appointed by the United States Shipping Board Emergency Fleet Corporation, one to represent the said corporation, one to represent the public and to be nominated by the President of the United States, and one to represent labor, the last to be nominated by Samuel Gompers. Two persons shall be so nominated by Samuel Gompers—one from the metal trades to sit when the matter under consideration concerns construction of shipyards or steel ships and one from among the trades primarily concerned to sit when the matter under consideration has reference to wooden hulls. Where such matter concerns wages, hours, or conditions applying to the production of both kinds of ships, only one of the two said nominees representing labor shall sit on said board, the question as to which of such nominees is to sit to be determined between them, or in the event of their disagreement to be determined by Samuel Gompers. When matters concerning any plant or plants are before the board, it shall invite a person representing and designated by the owner or owners of such plant or plants, and also a person representing, or selected by, the majority of the workers in the particular craft or crafts directly interested in the disputed matters, both of said representatives to sit with voting power as associate members of said board in connection with such matters.

If a question coming under the jurisdiction of the board arises with reference to such construction in a private plant in which construction is also being carried on for the Navy Department, the Secretary of the Navy, or such person as he may designate, shall sit with voting power as a member of the board. In the event of a tie vote when the board is so constituted, the decision shall be referred to the chairman of the Council of National Defense or to such person as he may designate. This memorandum shall in no way serve as a precedent for the procedure in Government plants under the War or Navy Departments.

The plants where such construction is being carried on shall be geographically districted by the board. In each district the contractors in whose plants such construction is being carried on, and the representatives of such international labor organizations as have members engaged in such production or construction in such plants and as are selected for the purpose by the labor member of the board, shall be called upon, under conditions to be laid down by it, to agree upon a person or persons who shall act under the direction of the board as examiner or examiners in such district. If the board does not succeed in having an examiner so selected, then the board shall by unanimous action select a person or persons for such position. The examiner shall be subject to removal by the board at any time by unanimous vote. It shall be the duty of the district officer of the United States Shipping Board Emergency Fleet Corporation to report promptly to the board any dispute with reference to wages, hours, or conditions of labor which he is unable to adjust satisfactorily to the principals concerned; but the board will take cognizance of such dispute when information concerning it comes from any source whatsoever. Before the district officer shall refer such dispute to the board he shall confer with the local spokesmen or representatives of such crafts as are involved in such dispute, or with such authorized heads of any local labor organization interested therein as may be designated by the labor member of the board, or, on their request, with the national head or heads of such organization or organizations or his or their duly authorized representative or representatives. When it appears to the board that such dispute can not be so adjusted it will promptly send an examiner for said district to such plant to bring about mutually satisfactory adjusment, the terms of which shall, if they receive the approval of the examiner, be in a report submitted by him to the board for its ratification. If the examiner does not succeed in bringing about such adjustment, he shall in his report to the board recommend terms of adjustment. The board, after due consideration and such investigation as may seem necessary, shall decide the questions at issue.

As basis standards with reference to each plant where such construction is being carried on, the board shall use such scales of wages and hours as were in force in such plant on July 15, 1917, and such conditions as obtained on said dates in such plants. Consideration shall be given by the board to any circumstances whatever arising after such wages, hours, or conditions were established, and which may seem to call for changes in wages, hours, or conditions. The board shall keep itself fully informed as to the relation between living costs in the several districts, and their comparison between progressive periods of time. The decisions of the board shall, under proper conditions, be retroactive, in which case accounting such as may be proper shall be made in accordance with the directions of the board. The decisions of the board will, in so far as this memorandum may be capable of achieving such result, be final and binding on all parties, but at any time after six months have elapsed following such ratified agreement or any such final decision by the board on any question as to wages, hours, or conditions in any plant such question may be reopened for adjustment upon the request of the majority of the craft or crafts at such plant affected by such agreement or decision.

AUGUST 20, 1917.

The above final draft being the same with minor changes as that agreed to by the Secretary of the Navy on August 16 is hereby approved.

F. D. ROOSEVELT,
Acting Secretary of the Navy.

AUGUST 20.

Edward N. Hurley, chairman United States Shipping Board; W. L. Capps, general manager Emergency Fleet Corporation; Jas. O'Connell, president Metal Trades Department, American Federation of Labor; Wm. H. Johnston, president International Association of Machinists; A. J. Berres, secretary-treasurer Metal Trades Department, American Federation of Labor.

Approved as approved by the above, August 20, 1917.

Samuel Gompers; Jos. H. Valentine, president International Moulders' Union, per S. G., representing the United Brotherhood of Carpenters and Joiners of America; Theobald M. Guerin, general executive board, first district; John Donlin, president Building Trades Department, American Federation of Labor; Frank J. McNulty, president International Brotherhood of Electrical

Workers, per S. G.; John R. Alpine, president United Association of Plumbers, Gas, Steam, and Hot Water Fitters, etc., per S. G.; Milton Snellings, president International Union of Steam and Operating Engineers, per S. G.; Jas. A. Franklin, president International Brotherhood of Boilermakers, Iron Ship Builders, and Helpers of America, per A. J. B.; Jas. Wilson, president Pattern Makers' League of North America, per S. G.; J. W. Kline, president International Brotherhood of Blacksmiths of America, per S. G.

Submitted as signed, August 25, 1917.

Louis B. Wehle; Wm. W. Britton, president Metal Polishers, Buffers, etc.; International Union of North America, per S. G. (Aug. 27, 1917).

The CHAIRMAN. Have you had anything to do, Mr. Stevens, with the letting of the contracts?

Mr. STEVENS. No, sir; I have not. And that brings me to a matter I am very anxious to speak about. On Wednesday of last week, while I was on my way down to the promised land of Florida, the Washington Post published an article, which you and the other members of this committee have no doubt seen, in which it was stated that the Senate was going to "probe rich ship contracts." It started with this statement [reading]:

The extent to which members of the Shipping Board have awarded rich contracts to personal friends and political associates, regardless of their experience in shipbuilding, will be one of the interesting phases of the investigation of that body which the Senate will begin to-morrow.

I do not know that it is necessary for me to read this whole article, but I should like to read enough of it to show what the particular charge against me personally is. Further on in the article, it says [reading]:

It is the expectation that contracts will also be closely scrutinized in this connection and that this will disclose the awards of contracts to personal friends of members of the Shipping Board.

The impression has been cultivated in Washington that the retirement of Mr. Denman settled the wooden-ship controversy—that no wooden ships are being built, at least on the Atlantic coast. It would appear that this is not so, and the investigation doubtless will bring out the fact that the Shipping Board, through Mr. Raymond B. Stevens, of New Hampshire, its vice president, awarded a large wooden-ship contract about the time that Gen. Goethals was retiring last summer.

The contract was awarded to a New Hampshire construction company in which Robert Jackson, a Democratic politician, has an interest.

Then there is a long article about the contract, stating that it was for $10,000,000 and on a 10 per cent profit basis; that the company had to get all its lumber from the south; that the yard was located in a place where the ships could not be gotten out to sea without rebuilding a draw; and that the ships would probably be junked at the end of the war anyway.

I want to say about that statement that it is a deliberate lie from beginning to end. There is not an accurate statement in it. I was amazed when I saw the article and wondered how any paper could publish an article like that, when the least inquiry on the part of the man who wrote it or the editor of the paper would have disclosed its absolute inaccuracy.

I want, first, to state the method under which contracts have been let by the Emergency Fleet Corporation, during the time Gen. Goethals was there and during the time Admiral Capps was there.

The Shipping Board, neither as a board nor the individual members of it, has had a single thing to do with the awarding of any contract, neither the decision as to who should get a contract nor the terms of the contract. The Shipping Board Emergency Fleet Corporation had sole charge of that matter, and the general manager of the corporation was by the by-laws of the corporation given full power over the affairs and contracts of the company. Gen. Goethals, himself, and his own force, without consulting with the members of the Shipping Board, negotiated every contract that was let while he was president. After they were negotiated by the general—drawn up by his own legal force, which he himself appointed—they were O. K'd by him and sent to the president of the Emergency Fleet Corporation, who happened to be the chairman of the Shipping Board, and they were signed by him as a matter of course, without submission to the Shipping Board as a board or any of the members thereof. That was the practice throughout all the time Gen. Goethals was there and while Admiral Capps was there.

Furthermore, all the other statements in there are inaccurate. I never had seen this particular contract, had nothing to do with the awarding of it or any of the details of it.

Now, I have a letter here from Gen. Goethals himself, which I should like to read and have made a part of the record. It is addressed to me [reading]:

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
Washington, December 26, 1917.

Hon. RAYMOND B. STEVENS,
United States Shipping Board, Washington, D. C.

MY DEAR MR. STEVENS: My attention has been called to an article in a newspaper relating to a contract let by the Emergency Fleet Corporation to the Mendell Engineering Co., which by inference contains a gross injustice to you. I feel it ought not be allowed to stand uncorrected. As I know the facts perhaps as well as anyone, I am writing this letter to you about it.

The charge in the paper was in substance that the interests in this company were friends of yours and that you awarded this contract to them, and that it was extremely profitable.

While I was general manager, contracts were "awarded" by the Emergency Fleet Corporation organization. You had nothing whatever to do with the awarding of the contracts. I awarded them, O. K'd them, and the officers of the corporation signed them on my O. K. The members of the Shipping Board and the trustees of the corporation took no action whatever in regard to contracts. This applies to the Mendell Co. The contract with them was negotiated and approved by the organization of the Fleet Corporation. The contract was drawn by the law division of the corporation, and it was all settled at the time I ceased to be general manager. When I left, this contract had been O. K'd by me and in the ordinary course of business would have been signed by the president of the corporation. I understand the contract was subsequently approved by my successor, Admiral Capps, and signed on behalf of the corporation.

The contract was "awarded," approved, and O. K'd by me during my administration, and you, as I have before stated, had nothing whatever to do with the contract or any of the negotiations connected with it.

Yours, sincerely,

GEO. W. GOETHALS.

I see there are members of the press present, perhaps a representative of the Post. I hope that paper will at least have the decency to give as much publicity to the truth as it gave to the lie.

Senator NELSON. I ask for information. Is this related to the contract for building ships on the Piscataqua River, in New Hampshire?

Mr. STEVENS. Yes; in New Hampshire.

Senator NELSON. And the yard was to be above a certain bridge?

Mr. STEVENS. Yes.

Senator NELSON. Now, I want to be frank with you. I have nothing against you, and you do not want to take it in that light——

Mr. STEVENS. No, sir; I will not.

Senator NELSON. But it has been whispered around here since I have come here that this contract was let for building ships on the Piscataqua River above that bridge, and that it would be impossible to get the ships out without changing the bridge, and that would involve an expense of $100,000 or more. I have heard that story. I do not want you to think I take any stock in it, but I think it is fair to you to state it to you so you can answer it.

Mr. STEVENS. Yes, sir. I never heard anything about that until I saw it in the Post.

Senator NELSON. I have not read this statement in the Post.

Mr. STEVENS. It so states in the Post. The Post states: "Mr. Jackson has requested the War Department to widen the draw at the expense of the Government." Since I read this article I have got this information about that bridge—that it is true that the draw on the bridge has got to be widened to let the ships out. That was known at the time the contracts were let, and the War Department some time ago ordered the Boston & Maine Railroad, at its own expense, to widen that draw, as an obstruction to navigation; and it is being done, and being done by the railroad at the expense of the railroad.

Senator NELSON. That clears that up. The railroad company is to do that work without any cost to the Government.

Mr. STEVENS. You would think from this article that there had been only one contract let on the North Atlantic coast for wooden ships——

Senator NELSON. Was this a wooden-ship contract?

Mr. STEVENS. Yes. As a matter of fact, there are 6 or 7 in Maine. There is a list of 25 or 30 north of New York, of which this is merely one.

Senator NELSON. Are they not building wooden ships now in Maine?

Mr. STEVENS. Yes.

Senator NELSON. Under Government contracts?

Mr. STEVENS. Yes. I will furnish a list of them here. There are 6 contracts in Maine for wooden ships, let by the Emergency Fleet Corporation.

Senator NELSON. Let that go in at this point.

Mr. STEVENS. I would like to put in a list of the companies having contracts for wooden ships, their plants being located north of Baltimore.

The CHAIRMAN. It will be printed in the record.

(The list referred to is here printed in full, as follows:)

George A. Gilchrest, Thomaston, Me.
Groton Iron Works, Groton, Conn.
Cumberland Shipbuilding Co., South Portland, Me.
L. H. Shattuck (Inc.), Portsmouth, N. H.
Freeport Shipbuilding Co., South Freeport, Me.
Kelly-Spear Co., Bath, Me.
Housatonic Shipbuilding Co. (Inc.), Stratford, Conn.
Sandy Point Shipbuilding Corporation, Sandy Point, Me.

American International Corporation, Philadelphia, Pa.
Newburgh Shipyards (Inc.), Newburgh, N. Y.
Federal Shipbuilding Co., Hackensack River, N. J.
American International Corporation, Philadelphia, Pa.
Bayles Shipyards (Inc.), Port Jefferson, Long Island, N. Y.
Submarine Boat Corporation, Newark, N. J.
American Shipbuilding Co., Buffalo, N. Y.
Atlantic Corporation, Portsmouth, N. H.
Foundation Co., Newark, N. J.
Groton Iron Works, Noank, Conn.
Ship Construction & Trading Co., Stonington, Conn.
Portland Ship Ceiling Co., Portland, Me.
Downey Ship Building Corporation, Williken, Richmond Borough, New York City.
Gildersleeve Ship Construction Co., Gildersleeve, Conn.
Kingston Ship Building Co., Kingston, N. Y.

Mr. STEVENS. It is true that the main timbers in those ships have to be southern pine, but New England has always been a center of the shipbuilding industry, and contracts were let up there because there were men up there who knew how to build wooden ships.

Senator JONES. Will they have to bring timbers for these ships from the Pacific coast?

Mr. STEVENS. Well, the contracts for southern pine timber—the contractors have fallen down in getting the necessary amount, and some timber is being shipped from the Pacific coast. There is a great quantity of Douglas fir, which is the other most valuable wood in shipbuilding.

Senator JONES. It was indicated here in the testimony, I think, of Mr. Piez, or if not, in the testimony of some one else, that these contracts would very likely have to be transferred to the Pacific coast. Do you suppose these Maine contracts will likely have to be transferred to the Pacific coast?

Mr. STEVENS. I do not think so.

Senator JONES. This was on account of timbers that would otherwise have to be brought from the Pacific coast.

Mr. STEVENS. That is the first I have heard of any transfer.

The CHAIRMAN. Probably it referred to contracts lately let, where the ships have not actually been begun.

Mr. STEVENS. I would like to point out that this particular contract, which this newspaper charges I awarded to friends of mine——

Senator JONES. It seems to be clear you had nothing to do with the awarding of that.

Mr. STEVENS. I want to point out that it was not only awarded originally and O. K'd by Gen. Goethals, but it, along with about 25 or 30 other contracts, was awaiting the signature of the president of the corporation when both Mr. Denman and Gen. Goethals left the corporation; and these same contracts, including this one, were O. K'd later on by Admiral Capps and signed by the president of the Emergency Fleet Comporation.

Senator NELSON. And both their successors approved it?

Mr. STEVENS. Yes, sir.

Senator HARDING. Was there any investigation made of the status of wooden-ship building by a Charles M. Inglis?

Mr. STEVENS. Not that I ever heard of.

Senator HARDING. Do you know of any such report on file with the board?

Mr. STEVENS. No.

Senator HARDING. Mr. Chairman—pardon the interruption—I would like to suggest that the board be requested to furnish the committee with a copy of a report on file from Mr. Charles M. Inglis.

Admiral BOWLES. I can furnish it.

The CHAIRMAN. Mr. Stevens, can you agree to furnish that report?

Mr. STEVENS. Yes.

Admiral BOWLES. I will furnish it, Mr. Stevens.

Senator JONES. You can furnish it, whether it is with the board or with the Emergency Fleet Corporation?

Mr. STEVENS. I would like to emphasize a little the fact that the Emergency Fleet Corporation and the Shipping Board have been two separate identities, and that the Shipping Board has not interfered with the management of the Emergency Fleet Corporation.

Senator JONES. And Mr. Inglis may have been acting for the Emergency Fleet Corporation?

Mr. STEVENS. He may. Gen. Goethals selected his own force, his own assistants, scattered throughout the country; he let his own contracts, under a general authority given to him when he came there.

Senator HARDING. Mr. Stevens, we have been given lately the very distinct impression that they are very much one now.

Mr. STEVENS. They are.

Senator HARDING. I hope you won't entirely disillusion us on that.

Mr. STEVENS. No, sir; I will not. They are very much one now. The Shipping Board, of course, owns the stock of the corporation, and the membership of the Shipping Board are the members of the board of directors of the corporation. The only way in which the members of the Shipping Board as directors of the corporation have had anything to do with the shipbuilding program has been on the question of general policy, not at all on the question of the details of private contracts or who should get the contracts.

Senator JONES. The only difference now is that the powers that were formerly vested in the general manager are now vested in the president of the board?

Mr. STEVENS. They are.

Senator NELSON. You have no general manager now as you had before?

Mr. STEVENS. No, sir; we have not.

Senator CALDER. Mr. Stevens, there has been some reference made to the delay in building the wooden ships on the east coast. Do you know whether or not it is a fact that this delay is caused by the increased size of the timber required in the building of the ships over that required by the original plans and the inability to get southern timber of the size called for by the changed plans?

Mr. STEVENS. I understand that the specifications for the wooden ships were changed, and some of the timbers were increased in size. That undoubtedly, like any change in the specifications, has caused delay. I assume probably—and this I get from shipbuilding men—there is no one thing that so much delays the work on a vessel as to have changes made in the specifications. I might say that is something the board never acted upon. I first saw it in the papers. I mean the Shipping Board has attended to its business and the

general policy and left the whole matter of the details of these ships—what the timbers should be, what the specifications should be, and the engines and the power—to the experts in the Emergency Fleet Corporation and has never undertaken to interfere with the details, realizing that a double control of that kind, in details, through a general manager and five members of the Shipping Board, would lead to endless chaos and confusion.

Senator NELSON. It is a wonder it did not lead to something worse.

The CHAIRMAN. You can not state yourself about when these changes took place, Mr. Stevens?

Mr. STEVENS. No, sir; I do not know a thing in the world about them.

Senator BANKHEAD. That is the very question I was going to ask. What time elapsed between the first specifications and the contract under the first specifications and the change in those specifications?

Admiral BOWLES. I am responsible for those changes, Mr. Chairman. I can tell you about that.

Senator BANKHEAD. I am not asking who is responsible. I am asking now what time elapsed.

Mr. STEVENS. Well, sir, Admiral Bowles will——

The CHAIRMAN. That is a very important inquiry, and we will take it up with Admiral Bowles.

Senator BANKHEAD. Very well, then; we will take it up with Admiral Bowles.

Senator NELSON. Has there been any difficulty, Mr. Stevens, in securing material for steel ships?

Mr. STEVENS. There has been some, yes; and some delay originally in getting the necessary material, but that is very much better now.

Senator NELSON. And there has been difficulty in getting a supply of timber for wooden ships?

Mr. STEVENS. Yes, sir.

Senator NELSON. There has been more in proportion, has there not?

Mr. STEVENS. Yes, sir. There is a serious strike on the Pacific coast in the lumber business, which interfered with the delivery of lumber to the yards for a while.

Senator NELSON. I see Secretary Wilson has been trying to fix it up. Has he got it fixed up, do you know?

Mr. STEVENS. No; I do not. The last I heard was that they had hopes.

Senator JONES. You keep in pretty close touch with matters of that kind, do you not?

Mr. STEVENS. Yes, sir.

Senator JONES. But you do not know whether he has had it fixed up or not?

Mr. STEVENS. No, sir.

Senator NELSON. I see Secretary Wilson has returned, but he is sick, confined to his house.

Mr. STEVENS. We have had labor troubles enough of our own——

Senator JONES. The furnishing of timber for the building of your ships is a matter that you are directly interested in?

Mr. STEVENS. We are directly interested, that is true, but so far have not extended our agreement with labor to cover the other industries which are furnishing supplies to the ships, although we expect to do that, but we expect to do that in cooperation with the

other departments which are also interested in those same industries.

Senator NELSON. I remember, Mr. Stevens, reading some time ago—I can not locate the date—that the Government needed a lot of spruce timber for aeroplanes, and they had to get it on the Pacific coast, and there was a strike among the lumbermen, preventing the Government from getting the spruce timber. Do you know anything about that?

Mr. STEVENS. I merely know in a general way that there has been such a strike, and largely, I think, for the eight-hour day and better living conditions. It has been generally reported that the I. W. W. were very active in that strike.

Senator NELSON. I want to ask Mr. Stevens a question. We are all anxious to help you in your work, to help your board and your corporation. Now, is there anything you can suggest that we can do here in Congress to aid you in expediting your work? We want to help you, and you must help us.

Mr. STEVENS. I think, Senator, we need a suitable appropriation and perhaps some additional legislation that will give the Shipping Board both the money and the power to provide the necessary housing. We find in the shipbuilding industry, perhaps more than almost any other, that the difficulty in getting men, the difficulty in keeping men, is due to the unattractive conditions under which most of them have to live. The shipyards have to be located at a place where there is a good place to launch ships, which frequently is not a good place to live.

Senator NELSON. But, Mr. Stevens, suppose we give you a big labor appropriation, what assurance have we poor Senators and Congressmen that you will not make another 10 per cent dip into that appropriation and give another 10 per cent bonus?

Mr. STEVENS. Senator, if our 10 per cent war premium or bonus employment results in a greater output of ships at once, will you feel that we have squandered the money that Congress has given us? If it does not, it will be dropped. It is an experiment——

Senator NELSON. I wish you would keep a record of this 10 per cent business and let us know the effect of it—how much it will increase the men working four days in the week to six-day men and how much more efficiency you get out of them by this bonus. You will agree with me that if you do not produce more efficiency you ought not to give it.

Mr. STEVENS. Yes, sir.

Senator BANKHEAD. Mr. Stevens, while we are talking about bonuses and war premiums, I wish you would tell us the difference between the two—between a bonus and a war premium.

Mr. STEVENS. A bonus is something which the employer gives to the employee to get more out of him. A war premium is an additional inducement which the Government offers labor for a greater output.

Senator BANKHEAD. That is very satisfactory. [Laughter.]

Senator HARDING. Is it not true, as a matter of fact, that a bonus is a premium on a larger output, while the war premium is merely pay for consecrating his time to the Government?

Senator BANKHEAD. Don't you mix this thing up now. [Laughter.]

Senator HARDING. That is worth your thinking about, because in the one case you pay for the delivery of the goods, and in the other case you pay only for the time.

Mr. STEVENS. That is true; there are bonuses which exist in the shipbuilding industry in certain places, based upon piecework, where the man is given the ordinary piece rate for a certain number of rivets, for instance, which is supposed to be the normal amount that a man can drive; and then frequently there is additional pay for every rivet driven over that.

Senator HARDING. You see, Mr. Stevens, organized labor in its representations here in Congress has actually stopped the adoption of efficiency measures and the payment of bonuses for extra production in various governmental departments, so evidently this is quite a different thing; your war premium does not relate to that at all.

Mr. STEVENS. No. Of course we are very certain of this. You will find some men who have been working only four days a week; if that man works six days a week we are certain to get an increased production.

Senator HARDING. I grant that.

Senator NELSON. Is this paid to the individual men?

Mr. STEVENS. Yes.

Senator NELSON. You pay it?

Mr. STEVENS. The corporation pays it and charges it to us.

Senator NELSON. They pay it to the individual?

Mr. STEVENS. Yes.

Senator HARDING. Just one more question in that connection, relating to a matter of policy. The Shipping Board discouraged, in fact stopped, the private production of ships, because you were apprehensive that the excess price paid would result in a demoralization of the business. Does the sanctioning of excess pay on the part of the Emergency Fleet Corporation have that same effect?

Mr. STEVENS. Well, we do not think we are paying excessive wages.

Senator HARDING. Maybe I do not express myself happily—just say higher wages, higher compensation.

Mr. STEVENS. Let me explain. If the Shipping Board is the only owner of ships under contract on the Pacific coast, and it establishes a scale of wages that all the contractors will pay, there is some hope of stability in the labor market and some hope of stopping this continuous shifting from plant to plant. Now, if in that same district we allowed some private American or foreigner to go in and place contracts for steel ships at prices double the prices we pay—because they will pay almost any price for ships—that man would go out and bid up the market for labor and disrupt our whole labor situation on the whole coast. What he paid his men would become the standard for the demands of the men in our own yards.

Senator HARDING. Let us see where we are going to get. You said a while ago that on the first of next February this war premium becomes a permanent wage. Then is it the policy of the Emergency Fleet Corporation, after that becomes a permanent wage, to again pay a bonus to get labor to work six days?

Mr. STEVENS. This 10 per cent war premium was made a permanent thing February 1 in the hope that it would make labor satisfied on the coast, because we knew there had been quite an increase in the cost of living since our wages were made effective. If, as a matter of fact, the result of this war premium in the two months will be in effect a substantial increase in production, the probability is, in my judgment, it would justify the extension of the premium again.

Senator HARDING. That is, another increase?

Mr. STEVENS. Yes, sir.

Senator HARDING. I ask you that question, Mr. Stevens, in perfect fairness, I hope, because it is pretty generally reported throughout the coal-mining sections that one of the difficulties in getting coal produced is that the miners are earning so generously—if I may use that term—that it is difficult to get them to stick to their work like they did under the old scale. I want to know what is going to be the ultimate effect on our various industries, shipbuilding included, if we continue to add to the compensation, as your policy seems to suggest.

Mr. STEVENS. No; I do not think we continually add. We propose in this industry—and the same thing must be adopted in other war work—that during the war the factor which must govern wages is the increase in the cost of living. Ordinarily it is the whole question of demand and supply, and with this tremendous demand for labor in certain industries there would be almost no limit to which wages would go. Now, if we take as the basis of wages the cost of living and make such an increase as the cost of living shows is necessary to preserve the same standard of living, we have got a fair and equitable basis of wages which can not be excessive, and which they ought to receive. Now, if on top of the wage which the cost of living makes necessary we add some kind of premium for continuous output or increased production, that is something in addition to and apart from the ordinary standard wage.

Senator HARDING. But, Mr. Stevens, what makes the cost of living?

Mr. STEVENS. Well, high wages is one of the things, of course.

Senator HARDING. That is the point I am getting at. Where is the end? What is the solution of the thing?

Mr. STEVENS. Of course, high wages is only one of the elements of the increased cost of living.

Senator HARDING. I am not trying to solve the problem; I am trying to get some light on this subject. Where are we drifting?

Mr. STEVENS. Of course, the drift for a long time has been toward higher wages and higher cost of living. We hope the Government policy of establishing prices for certain essential commodities and the Government's policy of trying to get the level of wages for all governmental work uniform and on a basis of the cost of living will have some tendency to keep things more stable and will stop the advance.

Senator NELSON. Mr. Stevens, it seems to me the difference between your board and your corporation and Congress is this: We provide for a tax on excess profits; you give 10 per cent excess profit but do not tax it. Is not that the case?

Mr. STEVENS. No; I do not think that is quite the case. We are not giving 10 per cent excess profit to the contractor; we are offering an extra inducement to labor for extra production.

Senator NELSON. Yes; that is excess profit on labor, is it not?

Mr. STEVENS. Well, if it gets high enough the income tax will slice off a little of it.

Senator NELSON. Let me ask you another question of a more serious character: Can the union men of the country, those that are in unions, supply all the help needed for shipbuilding?

Mr. STEVENS. No.

Senator NELSON. Then it is necessary, in order to secure plenty of help, to recruit people from other sources?

Mr. STEVENS. Yes.

Senator NELSON. And isn't it necessary to keep an open shop, then, so you can use those men, or would you unionize them as soon as you recruit them?

Mr. STEVENS. No. The position we take is this. In that fight of union and nonunion we are neutral; but the union must not insist, during the war, on closing the shop. On the other hand, we say to the employer, "You must not discriminate against the union men or interfere with the men forming a union if they want to."

Senator NELSON. That is the proper course, of course.

Mr. STEVENS. And, as a rule, we find very few union men who want to close the shipyards during the war. The men I have talked with said, "We realize we can not furnish all the men. We want an opportunity to furnish what we can, because we think"—and there is some truth in this—"that, as a rule, the most skilled men in the industry will be found in the union."

Senator NELSON. Are you taking steps to get recruits? I understood you were on the Pacific coast.

Mr. STEVENS. Yes; we are. We have already established some Federal employment agencies under the joint control of the Shipping Board Emergency Fleet Corporation and the Department of Labor. They have a representative and we have one.

Senator NELSON. That covers all branches of the shipbuilding industry?

Mr. STEVENS. Yes.

Senator NELSON. Are you intending to do the same thing on the Atlantic coast?

Mr. STEVENS. On the Atlantic coast. We are getting, first, from every shipbuilder who has a contract with us a statement of the number of men he has at present in every grade of work, the number of men he could immediately put on each grade of work, and the number of men he is able to put on in two weeks, four weeks, six weeks, or eight weeks; so we are first going to get a picture of the demand, and then we are creating the machinery for drawing that demand from other industries and other places.

Senator NELSON. Let me ask you, is there much complaint, if any, among these shipbuilding contractors about the scarcity of labor? Have they any difficulty in operating their plants?

Mr. STEVENS. Most of them say they can use more men. There has been a great deal of stealing from one another. I might say that during the month of December we had reports from 106 shipbuilding

companies showing that during the month of December they would like 20,000 additional men.

Senator NELSON. How many did they have at that time?

Mr. STEVENS. They probably had over 100,000—105,000.

Senator NELSON. That would be an increase of 20 per cent?

Mr. STEVENS. Yes.

Senator BANKHEAD. Mr. Stevens, you have in all something like 150 contracts, have you not?

Mr. STEVENS. Yes; 146.

Senator BANKHEAD. Have you any standard rule in making these contracts as to what amount of the capital required shall be furnished by the contractor?

Mr. STEVENS. No, sir; I do not know. Let me say, as a member of the Shipping Board I do not know what the standard is. I merely knew in a general way——

Senator BANKHEAD. You can find that out for us, can't you?

Mr. STEVENS. Yes; I could. I knew this. I knew that the country had been divided into districts by Gen. Goethals. In each district there was a head office, and when anybody in that district wanted a contract it was first referred to him for investigation and report as to the experience, financial standing, reputation, and ability of the people who wanted the contract.

Senator BANKHEAD. But then you had no definite rule as to the percentage?

Mr. STEVENS. I do not know whether the Emergency Fleet Corporation had or not.

Senator BANKHEAD. You said a while ago you let a contract up on that river in New Hampshire for $10,000,000, I believe?

Mr. STEVENS. No; the newspapers said I awarded a contract. A contract was awarded by the Emergency Fleet Corporation, not for $10,000,000, but for $5,000,000.

Senator BANKHEAD. That is all right; I understand that. Have you any means of knowing how much capital that company had to put into that contract?

Mr. STEVENS. I can find out, but I had nothing whatever to do with awarding that contract, and therefore I do not know a single thing about it.

Senator BANKHEAD. What I would like to know is whether some of these contractors, after investigation as to their financial status and experience and all that sort of thing, have been awarded contracts where the Government puts up practically all the money?

Mr. STEVENS. I do know in a general way that some of the contractors have to have money to build their plants.

Senator BANKHEAD. I know that; I am not objecting to that. What I want to know is what the minimum is, if there is any.

Mr. STEVENS. I do not know.

Senator BANKHEAD. You can find out?

Mr. STEVENS. Yes, sir.

Senator BANKHEAD. Let us know that. I do not put any credence in all these rumors that have been floating around, but it has been suggested that contracts have been awarded where the contractor had no capital, or practically none, and that the Government was putting up the money. I would just like to know how much truth

there is in a report of that sort. I will say, Mr. Stevens, I am inclined to agree with you fully about your bonus plans and your war premiums and all that sort of thing. If you are going to get more ships built and get them built quicker, I think it is going to prove to be a good policy. We may have to pursue it still further, but what I am fraid of is if it does not turn out like you think it will on the Pacific coast and you have to abandon it, you will have the devil to pay out there, if you will pardon the expression. And it is not going to be long, I am afraid, before everybody on the Atlantic coast is going to insist that they are entitled to the same bonus, whether you get the same results or not.

Mr. STEVENS. We have trouble enough either way, whether we do or we don't.

Senator JONES. Mr. Stevens, I understood from you a while ago that you want all the yards on the Pacific coast to be Government yards; that is, doing Government work and under Government control?

Mr. STEVENS. That has been the general policy of the corporation; yes.

Senator JONES. And as I understand, it is the policy of the board to discourage the building up of private shipyards to work on private account?

Mr. STEVENS. In general, that is true.

Senator JONES. And. in general, that will be the policy during the war?

Mr. STEVENS. In general, that is true; there have been some exceptions.

Senator JONES. What exceptions have there been?

Mr. STEVENS. Well, there have been some contracts for wooden ships to private individuals, and I think some foreign craft which have been allowed.

Senator JONES. What size ships?

Mr. STEVENS. About the size the corporation is building—wooden ships.

Admiral BOWLES. It is all in the record.

Senator JONES. I think Mr. Piez said you might encourage something of that kind for ships under 2,500 tons, but would you think it best for the Government to encourage the building of private shipyards on the Pacific coast?

Mr. STEVENS. For private contract?

Senator JONES. For private contract.

Mr. STEVENS. No. If there was a firm there so fixed that they could build the ships, they ought to have a contract from the United States, as the Government, in my judgment, ought to take up the full supply of men and materials that America has got available for ships.

Senator JONES. That will be your policy throughout the war?

Mr. STEVENS. So far as I have anything to do with it, as a member of the board of trustees.

Senator JONES. Has there been any action by the board to encourage the closing of any yard there in order to get that labor to other yards?

Mr. STEVENS. No, sir; not that I know of.

Senator JONES. You would know if anything of that kind were done?

Mr. STEVENS. I think so, yes.

Senator JONES. You would not be in favor of anything of that sort?

Mr. STEVENS. No, sir.

The CHAIRMAN. There might be instances, Mr. Stevens, where your reports would be adverse to a man who wanted to build for the Government. Admiral Bowles, the general manager, might say, "We are unwilling to let a contract to this man because he does not satisfy us that he is strong enough or experienced enough to build ships." In a case like that would you take the position that that man should not engage in building ships for people who want ships to do business on the coast with, particularly if he is below your tonnage?

Mr. STEVENS. If he is below our tonnage and can show that his operations are not going to interfere with ours, why, we have no objection. A good many small industries, building schooners, barges, and smaller craft than we are building, are going on from Maine clear down to the Gulf.

Senator NELSON. You do not interfere with them?

Mr. STEVENS. No.

Senator JONES. Right in line with what the chairman has just asked you, suppose that the president of the Emergency Fleet Corporation now should reject the application of somebody to build a private yard or private shipbuilding. Would the board interfere with that, or entertain any appeal, as you might say, from him?

Mr. STEVENS. It never has. If any man who was turned down made an appeal direct to the trustees, they might act on it. They never have.

Senator JONES. That is what I want to get at—whether your policy would be to interfere with the president of the Emergency Fleet Corporation.

Mr. STEVENS. It has not been; no, sir; from the beginning. We have passed on questions of general policy frequently. I think you will find some resolution of the Shipping Board Emergency Fleet Corporation outlining the general policy to be such as I have just explained, but the actual carrying out of the details of that policy have been referred to the general manager of the corporation, and now to the president of the corporation without interference or suggestion from the board. The board has realized that the control and the carrying out of the policy should be centralized; it can not be scattered.

Senator JONES. The board would not entertain any appeal from a decision of that kind? I wish you would say that you would not.

Senator BANKHEAD. I believe I would say it if I were you, because you would be exactly right.

Mr. STEVENS. We never have, and I do not think we would.

Senator JONES. I wish you would make it a little more positive.

Mr. STEVENS. Well, all right; but I thought of the possibility that some Senator might come to me in behalf of his district [laughter], and while I would be perfectly willing to stand by the President, I should like to go through the form of telling the Senator we would give it careful consideration. [Laughter.]

Senator NELSON. I want to say to you, Mr. Stevens, that from my part of the country there will be no conflict with the board, because we are only engaged in building prairie schooners. [Laughter.]

Mr. STEVENS. I might say we have had no interference; we have had, I think, the most hearty cooperation of Congress in our efforts.

Senator NELSON. I agree with you, Mr. Stevens, that we ought to get all the shipbuilding force we can to work for the Government, regardless of private interests. That is our business and your business.

Mr. STEVENS. That is what we thought you wanted us to do when you gave us the money and the power.

Senator CALDER. Mr. Stevens, have you been furnished with a list prepared by the New York State authorities giving the men in the different trades in that State that registered last spring with the State authorities? I understand the Department of Labor has asked our governor for such a list and that our State has furnished a list to the Department of Labor, free of cost to the Federal Government, with something like 140,000 men that could be utilized for this very purpose. I thought you ought to know that.

Mr. STEVENS. Yes. When the demands have come in and we have received inquiries from shipyards saying they wanted such and such men, in addition to the plans we have had for establishing these agencies, we have immediately transferred their requests to the Department of Labor, which has some Federal employment agencies. Our plan is to work in cooperation with the Department of Labor.

Senator CALDER. This is a little different. In New York State we had a census taken of all labor, and there is in existence a list, obtainable by you and recently given to the Department of Labor.

Mr. STEVENS. That would be very valuable. We work through and with the Department of Labor in that.

Senator HARDING. Mr. Stevens, you have spoken a good deal here about speeding matters up, and expressed the conviction that the excess cost would be well worth expending, and I am quite inclined to agree with you. Now, with that much understood, I want to ask you if quibbling over cost during the past six months had anything to do with delaying the shipping program.

Mr. STEVENS. I think it has had something; yes, sir.

Senator HARDING. It has tended to retard the building program?

Mr. STEVENS. I think it has had some effect that way.

The CHAIRMAN. By "quibbling over cost" do you mean cost of labor, or materials, or what?

Senator HARDING. I am trying to suggest, Mr. Chairman, that there has been such an assumption of individual responsibility in guarding against somebody making a dollar because of the upheaval about profiteering that the program has been stopped by an excess of caution in that direction. That is the thought I had.

Senator JOHNSON. Mr. Stevens, what quibbling has there been about costs?

Mr. STEVENS. I know very little about the details of the quibbling over construction, because it was in the hands of the corporation. I simply know that certain large contracts which were practically brought down to a state nearly ready to close would perhaps drift along for quite a period of time before they were actually closed.

Senator JOHNSON. You have opened a new and rather wide subject, I think, by your response to Senator HARDING, so I would like you, in more detail, to explain what you meant when you responded to him that quibbling over cost had delayed the program. Do you want me to ask you questions in respect to it, Mr. Stevens?

Mr. STEVENS. That is a very wide field, and the details of it were not in my hands at all. I had nothing to do directly with it.

Senator JOHSNON. Well, who quibbled first?

Senator NELSON. I suppose it resolves itself into this: Have there been many applications for contracts that you refused to agree to?

Mr. STEVENS. I know that there have been a great many contracts—a great many people applied for contracts who did not get them. The two things I had particularly in mind—of course it is a subject I would rather other members of the board would go into, because I had nothing to do definitely with it.

Senator JOHNSON. The only reason I went into it at all was because you made the direct answer to the question of Senator Harding. Having gone into that, you leave upon everybody connected with the Shipping Board, don't you see, the odium of having quibbled at costs. Now, if there was only one man or two men or three men that quibbled at cost, I think it ought to be stated, and those who were not responsible for it ought to be relieved of that responsibility.

Mr. STEVENS. When I said "yes" I had in mind two rather important things. Just previous to the time Gen. Goethals resigned he had had under negotiation and consideration for a considerable period of time several very large contracts for the building of fabricated steel ships on a very large scale. These negotiations had got down to pretty near a settling point at the time he resigned. Then the board was reorganized, the Emergency Fleet Corporation was reorganized, and those particular contracts were not actually signed up and completed for from 6 to 8 weeks after the time when Gen. Goethals left. It is not surprising that new men should take some time to become acquainted with so tremendous a subject as that, and there was some reduction in the terms of those contracts below the point at which Gen. Goethals said he was ready to close the contracts.

Senator JOHNSON. Do I understand, then, from your response to the Senator from Ohio, that there were certain contracts ready for signature, and due to the resignation of Messrs. Denman and Goethals those contracts were held up for the period of six weeks or eight weeks thereafter?

Mr. STEVENS. The particular contracts which I refer to now, the contracts for the fabricated steel ships, were not in a form to be O. K'd; I mean there had been merely negotiations about them, but they had not been O. K'd by the general or in form to be signed. It is true there were 25 or 30 contracts which had been completely negotiated and put into shape to be O. K'd by Gen. Goethals, but were not officially signed by the president of the corporation at the time both Mr. Denman and Gen. Goethals left the board.

Senator JOHNSON. And were those contracts, then, held up for eight weeks?

Mr. STEVENS. For six or eight weeks. There was some delay.

Senator JOHNSON. How much delay, please?

Mr. STEVENS. The contracts themselves probably will show.

Senator JOHNSON. Approximately four or five weeks?

Mr. STEVENS. No; two to four weeks.

Senator JOHNSON. Were those the contracts you were referring to in answering the previous questions?

Mr. STEVENS. No; I referred to the fabricated steel contracts.

Senator JOHNSON. And those contracts were delayed, you say, for a period of six weeks or eight weeks?

Mr. STEVENS. Yes.

Senator JOHNSON. Was that as to a question of cost?

Mr. STEVENS. My understanding was it was largely due to the fact that that time was spent largely in the new organization, the new general manager familiarizing himself with those contracts, and the situation, and he reduced somewhat the terms of the contract.

Senator JOHNSON. Were they reduced?

Mr. STEVENS. They were reduced.

Senator JOHNSON. From what priee to what price, please?

Mr. STEVENS. Gen. Goethals appeared before the board of trustees and outlined these contracts just before he resigned, just at the time that trouble came. He stated that he was ready to close those contracts with the various companies on a basis of 6 per cent, on an estimated cost of $150 a ton. It was an agency contract.

Senator NELSON. Six per cent profit on $150 a ton?

Mr. STEVENS. A fee of $9 a ton for building the yard and building the ships as agents for the Government.

Senator JOHNSON. What ultimately were they closed for, please?

Mr. STEVENS. There were quite a number of modifications made in the contract. I think it was 5 per cent, with possibly some other reductions.

Senator HARDING. Would you mind asking him what they pay now per ton?

Senator JOHNSON. Would you mind telling us that, in response to Senator Harding's suggestion?

Mr. STEVENS. On these particular contracts?

Senator HARDING. Yes; if you will.

Senator JOHNSON. For similar contracts, I assume.

Mr. STEVENS. Well, these contracts are on an agency basis, a great many of the other contracts are on a fixed sum. The fixed sum runs to one hundred and sixty——

Senator NELSON. Not on a tonnage basis?

Mr. STEVENS. No; so much per ship.

Senator JOHNSON. Well, is this the matter you referred to when you say because of quibbling on the cost there was some delay?

Mr. STEVENS. One of the things, yes.

Senator JOHNSON. With whom were those contracts, please?

Mr. STEVENS. One was with the Submarine Boat Co.

Senator JOHNSON. Who are the submarine boat companies, generally speaking; who are they?

Mr. STEVENS. Well, I don't know.

Senator JOHNSON. All right; with whom was there any other?

Mr. STEVENS. The other was the International——

Senator JOHNSON. The International Ship Corporation?

Mr. STEVENS. Yes; the American International Corporation. That was a combination of interests made up of the Stone-Webster people and the New York Shipbuilding Co. and some other companies.

Senator JOHNSON. Do you know what other companies?

Mr. STEVENS. I could not tell you the details of that at all.

Senator JOHNSON. The contracts will show?

Mr. STEVENS. I do not know whether the contracts will show the varied interests interested, because I understand they formed a new corporation themselves in which they took the stock.

Senator JOHNSON. Were contracts with any other persons held up in like fashion?

Mr. STEVENS. Those were the two big contracts.

The CHAIRMAN. Was the Merchants' Ship Co. in those contracts?

Mr. STEVENS. My impression is that the general stated to the board of trustees at that time that he had had some negotiations with the Merchants' Fleet Corporation, and that probably he could close some contracts with them later, but that had not been carried on to a point——

The CHAIRMAN. No; I asked about the Merchants' Ship Co.

Senator JOHNSON. Now, who is responsible for that particular delay?

Mr. STEVENS. The new general manager.

Senator JOHNSON. And that was who?

Mr. STEVENS. Admiral Capps.

Senator JOHNSON. Let me ask you another question in that regard. Was not your corporation familiar with exactly what the Shipping Board was doing with respect to those contracts?

Mr. STEVENS. The corporation?

Senator JOHNSON. Yes.

Mr. STEVENS. Admiral Capps during the time he was with the corporation had the same power that Gen. Goethals had, and he did not report to the Shipping Board; he conducted his negotiations as he saw fit.

Senator JOHNSON. To whom was it that Gen. Goethals made the report just prior to his departure, that these contracts were ready for signature, or negotiation, if you term it so?

Mr. STEVENS. To the members of the Shipping Board.

Senator JOHNSON. So that they were all familiar with the facts, were they not?

Mr. STEVENS. They were, the old board.

Senator JOHNSON. Was there any discussion among them, or between them and Admiral Capps as to the delay that was occasioned in the signing of those contracts?

Mr. STEVENS. Three members of the board left—Mr. Denman, Mr. Brent, and Mr. White—a majority of the board; and the general manager, Gen. Goethals, and part of his force left. We had a new organization.

Senator JOHNSON. Well, to which organization was it that the general made this report on the eve of his departure—to the new board or to the old board?

Mr. STEVENS. To the old board.

Senator JOHNSON. Were you present at the time he made the statement?

Mr. STEVENS. I was.

Senator JOHNSON. Was it a matter of discussion among any of you subsequently?

Mr. STEVENS. It was never a matter of formal discussion by the board.

Senator JOHNSON. Was there ever any endeavor, so far as you are aware, to have Admiral Capps hasten?

Mr. STEVENS. No effort made on these fabricated steel ships, no interference with his plans, whatever.

Senator JOHNSON. Were there any communications that passed between you with reference to these particular ships or with reference to any contracts you thought delayed?

Mr. STEVENS. As to the 30 contracts which had been O. K.'d by Gen. Goethals and completed, and were awaiting the signature of the President, there was a vigorous effort made on the part of the two members of the old organization who remained to have those contracts officially signed and the work proceed without any delay?

Senator JOHNSON. That effort took what form, if you please?

Mr. STEVENS. Took the form of interviews.

Senator JOHNSON. Were there any written communications which passed between you?

Mr. STEVENS. I think not.

Senator JOHNSON. And the two members of the board that remained, who thus undertook to hasten the work, were who?

Mr. STEVENS. Mr. Donald and myself. I might say that the day on which these resignations were accepted, Gen. Goethals came to Mr. Donald and me and called our attention to the fact that here were a lot of completed contracts which had not yet been officially signed. There was no one with the power to sign them, both the chairman and vice chairman having resigned, and at his suggestion we had a meeting that night and reorganized and got a vice president, so that the work which the general's organization had completed might proceed without delay.

Senator JOHNSON. And that vice president was elected that very night?

Mr. STEVENS. Yes.

Senator JOHNSON. And who was it, please?

Mr. STEVENS. Mr. Donald.

Senator JOHNSON. When you approached Admiral Capps during the time these were being held up or delayed and vigorously asked him to hasten, what was his response?

Mr. STEVENS. Most of these contracts were for wooden ships on the Atlantic coast, and the admiral stated that he was much afraid that the lumber would not be available for so many ships, and that until he could be satisfied that there was a sufficient supply of lumber to justify starting to work he did not feel as if the contracts ought to be O. K'd. They were finally O. K'd and mostly reduced in number.

Senator JOHNSON. Did you gentlemen take issue with him in that view?

Mr. STEVENS. Well, of course, I did not know the details of the lumber situation at all in the South. I felt that as many of these companies had got to build a plant first and some of these ships under contract were not going to be completed for 18 months, we might

take some chance on being able to supply the lumber possibly later.

Senator JOHNSON. Did you protest in relation to the lumber for the fabricated ships, any of you, at any time, so far as you were aware?

Mr. STEVENS. No, sir.

Senator JOHNSON. Why did you not?

Mr. STEVENS. Because the board, during the time Gen. Goethals was there and during the time Admiral Capps was there, while it passed on general policies and authorized a program of spending money for wooden ships or steel ships, did not interfere with the details of any contract; it left to the general manager the complete power of working under those contracts and deciding the details, and it had to be so. I mean if five members undertook to get well posted enough on individual contracts to be butting in and trying to act on them or trying to tell the general manager what he ought to do, it would be certain to lead to worse results than doing nothing.

Senator JOHNSON. Well, were you familiar with the points of difference in respect to the contracts for the fabricated ships?

Mr. STEVENS. After Admiral Capps came in and took up the work I knew nothing about the negotiations as to what the details were or why they were not made quicker or what changes there were. They were not reported to the board at all.

Senator JOHNSON. Prior to the advent of Admiral Capps had you been familiar with the fact that negotiations were pending for these fabricated ships?

Mr. STEVENS. Gen. Goethals appeared before the board and made a statement a day or two before his resignation.

Senator JOHNSON. He made the statement in order that you might be familiar with the situation and have the contracts hastened, did he not?

Mr. STEVENS. He made the statement because he had been requested to make it by the chairman of the board.

Senator JOHNSON. Has not one of the sources of delay been the desire of everybody to reach the highest man in authority and the hesitancy to delegate the power to do things in the Emergency Fleet Corporation?

Mr. STEVENS. I could not say about that.

Senator JOHNSON. Then, to be perfectly fair to you in view of the questioning, was not a very considerable part of the delay in completing requisitions or commandeered ships due to the controversies over differences in cost after they were taken over by the Shipping Board?

Mr. STEVENS. I think probably there was some delay—not some delay over the normal production, but perhaps not as much expedition, not as much increase in expedition, possibly due to some delay over settling the terms under which the Government would take over those ships that were building for private accounts. For instance, our own contracts provide that the Emergency Fleet Corporation shall bear all increases in wages which are authorized. Now, the companies that had ships building for private accounts, of course, wanted to know where they got off on advances in wages; and as long as the increased expense for more wages fell upon the contracting company it was not in a position to speed up by going out and employing a lot more men. It would be in a position where

it would try and reduce expenses, to get along with as few as possible. We know that labor in a shipyard that is running on two shifts is always more costly than one shift, because the night shift of men is more expensive. I do not think there has been any delay in the production of these ships above the normal speed at which they were proceeding. I think failure to arrive at a decision concerning who should bear the increased cost of wages may have prevented some increased acceleration in production. There was a matter of general policy to be considered. Is it good policy for the Government to assume all the advances in wages on these commandeered ships? The board passed a resolution in favor of doing it, believing it would get the ships produced a great deal cheaper if that was done.

Senator JONES. Coming back to what Senator Johnson was inquiring about, as I understand it, a day or two before Gen. Goethals went out he appeared before the board with some contracts for wooden ships and some contracts for fabricated ships, which he had O. K.'d. Am I correct?

Mr. STEVENS. No; I think you are a little mixed on that.

Senator JONES. What were those contracts that he explained to the board?

Mr. STEVENS. The contracts that he explained to the board were these several large contracts for the building of several large plants, and the building of fabricated ships strictly for the Government.

Senator JONES. Then they were for fabricated ships?

Mr. STEVENS. Yes.

Senator JONES. And he had O. K.'d those contracts?

Mr. STEVENS. No; they were not in regular form; he merely stated that he had conducted the negotiations and was prepared to close contracts with these firms along certain lines; and the negotiations proceeded to a point where he was ready to close and put it in writing.

Senator JONES. Well, what were these contracts that had his O. K. that were turned over to Admiral Capps?

Mr. STEVENS. Those were contracts that Gen. Goethals' organization had been carrying on negotiations for for weeks and even months. Many of these contractors lived a long ways from Washington, and the contractor would be O. K'd and sent off and when it got back Mr. Denman signed it as president of the corporation—he signed all those contracts as a matter of course—they were never referred to the board, and never held up by Mr. Denman.

Senator JONES. I did not understand that. I understood the procedure; but I understood he appeared before the board to explain some contracts he had O. K'd; but it seems that is not the case.

Mr. STEVENS. No.

Senator JONES. As I understand, however, there were certain contracts he had O. K'd?

Mr. STEVENS. That is true.

Senator JONES. And went over to Admiral Capps?

Mr. STEVENS. Yes.

Senator JONES. And those were contracts that he had O. K'd and sent out to the contractors and they came back after he had resigned?

Mr. STEVENS. Yes.

Senator JONES. And that is how they happened to be turned over to Admiral Capps?

Mr. STEVENS. Yes; this Mendell contract, which I was accused of having passed out to my friends, was one of the contracts which was not signed officially at the time of the resignations.

Senator JOHNSON. Well, the fact of the matter is, then—in justice to Admiral Capps—that there was not any quibbling over cost that caused any delay?

Mr. STEVENS. I do not get you.

Senator JOHNSON. I say the fact is—from your explanation to Senator Jones—that there was not any quibbling over cost that caused any delay? Pardon me, if I am not plain. You answered Senator Harding directly that quibbling over the cost had caused certain delay in the shipbuilding program. You recall that?

Mr. STEVENS. Yes; as I explained, in my judgment, the delay in signing up these large contracts, and right at the time of the year when time and weather were most favorable for the starting of the yards, that delay, as I understood it, was largely time spent in reducing somewhat the terms of those contracts, although, of course, it is only fair to say that it was an enormous subject, and any man coming in new would require some time to familiarize himself with the situation.

Senator JOHNSON. About how much?

Mr. STEVENS. Well, as originally planned by Gen. Goethals, there were about $300,000,000.

The CHAIRMAN. In other words, it would reduce the cost $300,000,000 on those ships?

Mr. STEVENS. Oh, no; the cost would be reduced between 1 and 2 per cent.

Admiral BOWLES. About 1 per cent on the fee, and about $6 a ton on the ships.

The CHAIRMAN. What percentage of cost would that be?

Admiral BOWLES. That would be between 3 and 4 per cent.

Senator BANKHEAD. I would like to know exactly what you mean by fee?

Mr. STEVENS. The fee meant that the contractor should build the ship and get so many dollars for each ton in the ship, no matter how much it cost to build, the Government paying the price of the material and the labor going into it.

Senator BANKHEAD. That is where the fee comes in?

Mr. STEVENS. That is where the fee comes in.

Senator BANKHEAD. I do not understand it yet.

Senator NELSON. The fee was based on the tonnage of the vessel?

Mr. STEVENS. Yes; it was so much per ton.

Senator JONES. That is, if the vessel cost $200 a ton, the man who built it got 6 per cent of $200, or 5 per cent of $200?

Mr. STEVENS. No; they estimated that the ship ought to cost so much, and they gave him so much—6 per cent, which was $9. If it was more he still got the $9 and no more.

Senator HARDING. If it cost less he got the profit into less cost?

Mr. STEVENS. I think that there was some division if it cost less—that the contractor got some and the Government got some. There was some split between the contractor and the Government in such a case.

Senator JONES. Suppose the estimated cost was $150 a ton, and it actually cost $140 a ton; would he get one-half of that $10 in addition to his $9 a ton?

Mr. STEVENS. I have never seen the contract. I know there was a division of savings made through the efficiency of the organization. If the reduction in the cost of the ship was due to a saving in the price of materials, the Government had it all. If the reduction in the cost of the ship was due to the increased efficiency of the management there was some division.

Senator HARDING. While we are on that, let us clear up that matter. Can you not prompt yourself on that and tell us definitely in regard to that?

Mr. STEVENS. Well, as I said in answer to Senator Johnson, I would prefer to have somebody who is thoroughly familiar with the details to answer that question.

The CHAIRMAN. I think that Mr. Hurley testified that under some of these contracts if the cost of the vessel was reduced—that is, the price was reduced, say, $50 a ton, the contractor would get $25 and the Government would get $25.

Senator NELSON. We will have to take up the several contracts, and in no two cases, I suppose, are they exactly alike.

Mr. STEVENS. They differ——

Senator JONES. You said, in answer to Senator Harding, I think, that you had two matters in mind and you only referred to one of them. What was the other?

Mr. STEVENS. I said there was some official delay in signing up these contracts, which had been completed when Gen. Goethals left.

Senator JONES. That was one thing. What was the other?

Mr. STEVENS. In my judgment there had been some possible loss of possible speeding up due to delay in coming to terms with these contractors where we commandeered ships. I think at the moment that we commandeered the ships if the contractors had been notified that advances in wages hereafter on these contract ships would be borne by the Shipping Board, that we would have gotten more ships built. It would have cost more, but I think we would have gotten more ships.

The CHAIRMAN. There were some changes advocated by Admiral Capps other than the reduction you have spoken of?

Mr. STEVENS. Yes; and I do not want to create the impression that this delay was caused by merely haggling over terms. There were numerous changes made in the contracts. There was, unfortunately a loss of nearly two months' valuable time between the time the General went out—it is impossible to change entirely the organization of a board or corporation which has such important work and not cause some delay in the program, because the new men that come in must spend some time familiarizing themselves with what has been done and what the problems are; that is inevitable.

Senator HARDING. Mr. Stevens, did you answer the question as to how much money was saved in the reduction of the cost of these contracts by Admiral Capps in delay?

Mr. STEVENS. Well, Admiral Bowles said it would figure out, I think, about——

Admiral BOWLES. I should think it would figure out, roughly—it might be about $15,000,000.

Senator BANKHEAD. Before you sit down I would like to ask you a question, and if you do not care to answer it you need not do so. But I would like to ask you if it is not your opinion that this delay in the shipbuilding program is largely due to divided authority and responsibility among those who have control?

Mr. STEVENS. No, sir.

Senator BANKHEAD. You do not think so?

Mr. STEVENS. No, sir.

Senator BANKHEAD. Then what is the necessity for concentrating it in one head recently.

Mr. STEVENS. There was not really divided authority. Gen. Goethals up to the last minute went ahead without any let or hindrance on the part of the Emergency Fleet Corporation. Admiral Capps during the time he was there had supreme authority, and went ahead on his plans without any interference on the part of the Shipping Board or the trustees of the Shipping Board.

Senator NELSON. But no contract was complete in either case until the president of the board had signed it?

Mr. STEVENS. That is true, and the president of the board signed those contracts that were put up by Admiral Capps and Gen. Goethals, as a matter of routine and a matter of course without hesitation. I think Mr. Hurley, if he is here, will bear me out in that.

The CHAIRMAN. I think that has been stated.

Senator HARDING. Without delay?

Mr. STEVENS. Yes, sir. I might say that in my judgment there has not been as much delay in this construction program as the public has the idea. The so-called controversy which arose between Gen. Goethals and Mr. Denman did not up until the final break really interfere with the work of letting and pushing contracts. The general was going right ahead, letting contracts and signing them up and doing the work and making plans.

Senator NELSON. It was largely an academic difference, then?

Mr. STEVENS. It was largely a difference of temperament.

Senator JONES. But a condition even of that kind could not arrive now, could it?

Mr. STEVENS. No; I do not think it could; for everything is harmonized.

Senator JONES. That is one good thing.

Senator NELSON. Do you not think that the greatest thing you have accomplished to make this program effective is in unifying the administration, eliminating the general manager from the program?

Mr. STEVENS. Yes, sir.

Senator NELSON. But the source of your difficulty, the real source of your difficulty, was having two heads, practically, the Shipping Board and the president of the board, who was also president of the corporation, and then a general manager with plenary powers that you gave him in the by-laws?

Mr. STEVENS. Yes; the original by-laws, which were drawn to give Gen. Goethals practically supreme authority, also had a provision that the trustees or the directors elected under the by-laws had the power over the affairs of the corporation, and at any time when the trustees saw fit to do so they could interfere with the general manager.

Senator NELSON. The trustees of the corporation.

Mr. STEVENS. Yes; I think the organization is better now than it has ever been, both theoretically and practically.

The CHAIRMAN. Do you know anything about the American Bureau of Shipping?

Mr. STEVENS. Very little.

The CHAIRMAN. Do you know who the officers are and what its activities are?

Mr. STEVENS. I can not tell you all the officers. I think a man named Steenerson Taylor is at the head of it. Its business is to examine and rate ships for their classification for insurance companies, like Lloyds.

The CHAIRMAN. Do they have anything to do with the designs and specifications of Government ships?

Mr. STEVENS. Yes; I understand the designs for those ships have been submitted to both the American Bureau and Lloyds for their examination and classification, and for the safety and seaworthiness of the vessel.

The CHAIRMAN. Do you know what changes they have suggested in the designs and specifications in the vessels?

Mr. STEVENS. Originally I understood that both Lloyds and the American bureau had approved of the Ferris designs.

Admiral BOWLES. Only the American bureau.

Mr. STEVENS. And I understood later that the American bureau suggested some changes; whether that is true I do not know. Admiral Bowles can explain all about those changes. I am not a ship constructor at all, and have not followed any of the details.

The CHAIRMAN. I thought you could acquaint us with the relations of that body and its transactions with the fleet corporation.

Mr. STEVENS. No; I have not tried to exercise any of the authority of that body.

Senator SHERMAN. When the crew on board ship will not work, what do you call that?

Mr. STEVENS. Mutiny.

Senator SHERMAN. If the fellows that build the ship will not work, what do you call it—an industrial controversy?

Mr. STEVENS. Well, you call that an industrial controversy and also the exercise of an American free-born right to work or not to work.

Senator SHERMAN. So, then, you put a fellow out on the salt sea or out on the battle front and don't back him up?

Mr. STEVENS. Well, it always has been the rule, and always will be the rule, that aboard ship at sea a man must work and the master of a vessel to-day has every power that masters ever had, except to beat a man. The master can put a man in irons, he can put him on bread and water.

Senator SHERMAN. That is abolished in merchant shipping.

Mr. STEVENS. No; a master can do that to-day in the merchant marine if a man will not work.

Senator SHERMAN. The fellow that builds the ship, no matter whether it is an American ship or a ship for the United States Navy, is not subject to any such rules, of course?

Mr. STEVENS. No; that is true.

Senator SHERMAN. That is a part of the American's private rights, to work or not to work?

Mr. STEVENS. Yes.

Senator SHERMAN. And during the period of war—because that is what I am talking about—you would not favor any coercion of the man who builds the ship or makes a cannon or rifle, would you?

Mr. STEVENS. No, I would not; because I am satisfied, Senator, that the American Nation and the American workmen will produce more and do more to win the war under free American conditions than they will under any military compulsion.

Senator SHERMAN. And you think they can work more in four days and do more in four days, and loaf the other two days in the week and leave the shipbuilder alone, and yet you make a soldier work 24 hours a day, seven days a week in the week in France.

Mr. STEVENS. The same men that are at work in American shipyards do not object to being conscripted and sent into the trenches; but I believe that the man who works four days a week voluntarily in the shipyard will drive more rivets than a man who is driving rivets with a bayonet or a rifle at his back.

Senator SHERMAN. What about the fellow making rifles; does the same rule apply to him?

Mr. STEVENS. Yes.

Senator SHERMAN. Then there is one rule for a soldier and sailor and another rule for a member of a labor union?

Mr. STEVENS. No; there is one rule for the soldier and the sailor and a different rule for civilians, and always has been.

Senator SHERMAN. That is the end of it that appeals to Congress. During the time of war, when a civilian is at work in various lines supplying munitions and equipment for the sailors and soldiers, you still think that the same rule ought to apply as in time of peace, that that matter of industrial liberty ought to be preserved?

Mr. STEVENS. Let me say this: In the first place, if you are going to conscript labor, conscript it for Government purposes. Your soldier works for Uncle Sam; your man in the shipyard is driving rivets for the Cramp Shipbuilding Co. or the International Ship Co. or the Submarine Boat Co. He is working directly for a private corporation, which corporation is making a profit, and to say to that workman, "You must work for that company or we will put a bayonet or bullet into you," I don't think will produce results.

Senator SHERMAN. I agree with that, but there are no private shipyards, they are all Government undertakings now.

Mr. STEVENS. They are private yards with Government contracts.

Senator SHERMAN. But there is no such thing as a private contract, even the contracts are commandeered, even the ships on the ways are taken, and in whatever degree of completion they may be.

Mr. STEVENS. Yes; but the plants were not taken; the plants and property were not commandeered; we merely commandeered the contracts—the owners' rights.

Senator SHERMAN. I understand that; but the yards no longer enter into private contracts, do they? The private yards no longer enter into contracts?

Mr. STEVENS. The Government is practically their sole purchaser now.

Senator SHERMAN. And here is this 10 per cent bonus or premium, or whatever it is called. The end of private shipbuilding in this country has come about, except for small shipping—ships under 2,500 tons—and that shipping only to be used in coastwise trade and barge service, inland rivers, and the like. Now with all that, with the demolition of private shipbuilding and contracts and shipbuilding as a private industry, and taking this bonus out of the United States Treasury, money levied by Congress, produced by revenue by the billions, you still think shipbuilding is a private industry, and on account of the principles or law of industrial freedom you do not think Congress would be justified in making any change, although these men are working now on ship contracts practically controlled by the Government, and these industrial workmen are practically on Government contracts, are they not?

Mr. STEVENS. Yes; they are practically on Government contracts.

Senator SHERMAN. Now, would that justify a change?

Mr. STEVENS. I am not arguing the morals of the question——

Senator SHERMAN. I am asking these questions in reference to legislation and the morals of legislation.

Mr. STEVENS. I have one object in view, and I assume that Congress has that one object in view, and everybody else has, and that is how can we produce the most ships?

Senator SHERMAN. That is what I am getting at, too.

Mr. STEVENS. And the number of ships we can produce is going to depend more on labor than any other one thing.

Senator SHERMAN. The fighting we will get will depend on the soldiers and sailors.

Mr. STEVENS. Yes; and I believe that we can produce more ships under free labor than under conscripted labor.

Senator SHERMAN. Suppose we conscript these men that are building ships. The line is only an imaginary one, it is a theoretical one between Government shipbuilding and private shipbuilding, practically there is no distinction. There is no such thing as building ships privately; it is all private work. Now, it being a public undertaking, the building of ships, why are not the workmen in shipyards on the same basis as sailors aboard the ships and our soldiers in the field? Why would not this appeal to Congress? I am talking about the legislative end of it and the morality of legislation, as to making one rule for soldiers and sailors and another rule for somebody else, giving the industrial worker a 10 per cent bonus and four days' work only in the week. Now, appealing to the morality of legislation that Senator Nelson referred to, would it justify a legislator in changing his views on general industrial freedom that relates to private life?

Mr. STEVENS. I think the answer to that question goes a long ways back into history. There is not a sentiment against compulsory military service——

Senator SHERMAN. Then it is a sentiment?

Mr. STEVENS. It is largely a sentiment; yes. The man that is conscripted does not feel that he has been degraded, or that his liberty has been interfered with, because it has been an established method of securing soldiers for generations; but a man does feel that the question of whether he shall work in this yard or that yard or

work for one company or another company, or at these ways or the other ways, is a matter of individual liberty.

Senator SHERMAN. Then, if it be a matter of sentiment, do you not think Congress could well employ itself, and also the public press and individuals on the lecture platform who are doing Chautaqua service that would bring about a public sentiment that would break down that distinction in time of war?

Mr. STEVENS. I think the same amount of energy spent in trying to get the country to accept conscription and trying to get labor to accept conscription—because a large output from labor depends upon having willing labor, and not the driven slave——

Senator SHERMAN. I agree with you on that——

Mr. STEVENS. The same amount of energy spent in advocating conscription, if spent in appeals and education to the common people of this country to show them what this war really means to them, will make them patriotic and make them do the work without conscription.

Senator SHERMAN. Appealing to their sentiment?

Mr. STEVENS. Yes. I do think the Government thus far has not gotten in close enough touch with the workman. I have been out on a number of different cases working toward settling strikes, and I find that if a representative from the Government will go directly to the strikers, and for instance attend a mass meeting of strikers, and tell them about the war and what it means to them, and what the Government wants to do and what the Government expects, and what their relation to the war is, that will do more to settle strikes and increase production than almost anything else.

Senator SHERMAN. I agree with you on that, that is a good side to appeal to; but what about the element that will not work unless you give them the wages and the hours and the conditions of service that they dictate?

Mr. STEVENS. Well, Senator, that element that will not work in my opinion is so small that it would not pay or justify the Nation to adopt a general policy of conscription on that account, simply for the sake of compelling to work the small percentage of troublesome men and I. W. W.'s that make trouble.

Senator SHERMAN. Then why not appeal to the volunteer element for soldiers? We do not raise armies by the volunteer system any more, we draft them. Now, that is a mere matter of sentiment, that the service is volunteer in private life and industrial life; why not legislate by Congress in order to make it as honorable to conscript workmen as to conscript soldiers? What is the difference if you appeal to sentiment?

Mr. STEVENS. I think that sentiment is probably one of the most dominant forces that moves men, and I do not think that you can change a sentiment that has existed for years by legislation.

Senator SHERMAN. We changed the Volunteer system under which the Civil War was fought. But I would not change our present system of conscription, although I voted against it. Now, if we change that by legislation in one case, is not the other case also a proper subject of legislation and appeal to the same patriotic sentiment? This is a matter that appeals to the members of the House and of the Senate, and that is the reason I am asking it. It is not asked in a hostile spirit at all.

Mr. STEVENS. Well, personally I feel that the conscription that would compel men to work in industry would be contrary to every American principle and should be adopted only to save the very life of the Nation; and I think you can do that, that is that you can get the necessary materials and keep the men at work without force.

Senator SHERMAN. In time of peace I have no question about it, but in time of war the rule changes, and we changed the rule as to volunteers, and we now take soldiers and sailors involuntarily and make them engage in a much more difficult and dangerous undertaking and separate them from their families through this service, military and naval service, and we changed that by legislation, and it was a departure from almost a constitutional aversion that the American people were supposed to have an involuntary military service, but they have accepted it—even those who were opposed to it, in my judgment. Now, this is a sentiment for an involuntary industrial service. Do you think if Congress were to pass an act that during the war persons doing industrial service on contracts, directly or indirectly relating to the military or naval forces or instruments of the country, that public sentiment would not be subject to the same conversion?

Mr. STEVENS. I do not think so.

Senator SHERMAN. It would not be regarded as industrial slavery, but as a necessary means of a desired end?

Mr. STEVENS. I do not think it is desirable.

Senator SHERMAN. How many of these men with whom you have come in contact, if there were such a thing as conscription, would mutiny or break the law, any more than those that were drafted into the military or naval service would? Do you think there would be a general uprising of the industrial forces of the country?

Mr. STEVENS. I think there would be.

Senator SHERMAN. Leading to civil war?

Mr. STEVENS. No; I think it would lead to rather——

Senator SHERMAN (interposing). Impaired efficiency?

Mr. STEVENS. No; I think it would lead to rather hasty repeal of the law. I would say that we have had some experience as to that to go upon.

Senator SHERMAN. It might, if Congress was cowardly enough to do that.

Mr. STEVENS. Let me just give you a fact out of history: The English have attempted more or less of conscription; they made it a crime for a man to strike in certain industries. They posted notices announcing that fact all through Wales, where the mines are. Forty thousand, sixty thousand, one hundred thousand miners went on strike; and they would stand there in front of those Government cards and laugh at them. And Lloyd-George himself had to go to Wales and settle that strike, and had to give them an increase in pay. You can not put 100,000, or 500,000, or 1,000,000 or 10,000,000 men in jail; you can not do it.

Senator SHERMAN. That is like Edmund Burke's statement that there is no "method for indicting a whole people"?

Mr. STEVENS. Yes, sir. Now, with the whole sentiment of labor—and on this point the sentiment of labor is unanimous—opposed to conscription, feeling that it is unnecessary, and feeling that it is a

violation of the most fundamental rights they have, I think an attempt to conscript all labor would simply lead, not to disaster and riot, but to the cessation of work on such a large scale that you would have to do something to meet it. But, of course, this is all a matter, more or less, of opinion.

Senator JOHNSON. Well, it is very interesting, and you are doing very well.

Senator SHERMAN. I believe you have stated that England is pretty generally unionized; that it is 80 per cent or upward unionized?

Mr. STEVENS. Yes, sir.

Senator SHERMAN. Do you know the percentage in this country?

Mr. STEVENS. I think it is less than 25 per cent.

Senator SHERMAN. Less than 25 per cent. Then the other 75 per cent of industrial life in its various forms is not unionized?

Mr. STEVENS. Yes, sir.

Senator SHERMAN. So that England has 80 per cent, we will say, of the unionized forces; whereas in this country there is a majority of the open-shop employees in the shipyards, as you have found?

Mr. STEVENS. Yes.

Senator SHERMAN. Is it your observation that in other lines that more or less serve to furnish supplies for shipbuilding the same percentage prevails?

Mr. STEVENS. I think it likely; yes.

Senator SHERMAN. Do you think that it would lead to a very great industrial disturbance if Congress were to make the performance of service in industrial lines compulsory?

Mr. STEVENS. Yes, I do.

Senator SHERMAN (continuing). During the war—I am limiting all of these inquiries to the war?

Mr. STEVENS. I do.

Senator SHERMAN. What would be the nature of the disturbance in the shipbuilding lines, in your judgment?

Mr. STEVENS. I think a great many people would simply stop work.

Senator SHERMAN. Just quit?

Mr. STEVENS. Yes, sir.

Senator SHERMAN. Do you think the 75 per cent that have no trouble on the open or closed shop question would quit work?

Mr. STEVENS. I do.

Senator SHERMAN. All of them together?

Mr. STEVENS. I think a very large per cent of them would stop work just as soon as they had any reason for it.

Senator SHERMAN. Do you think there is any moral distinction between compelling a soldier by draft—or compelling a sailor, we will say—to render involuntary service and compelling the man who builds the ship that the sailor fights on to render involuntary service—any distinction in time of war?

Mr. STEVENS. There is no moral distinction, but there is a real distinction, and I think most of the men feel it. For instance, I would not object at all to being drafted and being sent into the trenches; but I would not like to be told by any official of the United States Government that I had to go to France and drive rivets for the next year, whether I wanted to or not. I think feeling is more or less

implanted in the American people throughout, that in industry there ought to be freedom.

Senator SHERMAN. Do you justify, then, in these controversies over open and closed shop, the picketing and the appeals by the union men to moral sentiment, and sometimes to physical education—to be polite about it—for the promotion of their cause?

Mr. STEVENS. No, I do not. And I might say that there have been comparatively few strikes on the question of the open shop. In nearly every instance where that question has come up the Government has succeeded in getting the issue dropped; and the agreement with them practically provides that there shall be no fight over open shop. In case after case that has arisen I have secured, on the part of the labor unions, an agreement not to raise that issue, or to drop that issue. The strikes have come largely over the question of increase in wages; and when you consider what the increase in cost of living has been since the war came on, it is not at all surprising that there has been this demand for increase of wages.

Senator SHERMAN. There is no controversy or question about that from anyone who knows the situation—and you do know it. You spoke a while ago of the coal miners in England. I have lived in a State that has 100,000 coal miners, and my own State has 20,000 coal miners. All that western soft-coal belt is more or less subject to the miners' union, and they are all a highly organized labor organization; there are a few nonunion operators and a few nonunion mines run by them. But when you take away the soft-coal supply, necessarily you either cause distress or you produce a greater demand for the anthracite coal—so that question is directly related to the war problem.

Suppose the miners all quit in midwinter in the hard-coal region, or in the soft-coal region, or both, what would we do? Where would you get the fuel to navigate or furnish power for those ships which we must have to transport our supplies to Europe?

Mr. STEVENS. I can only refer you to Mr. Garfield, head of the Fuel Administration, upon that question.

Senator SHERMAN. Would we not have to draft them?

Mr. STEVENS. I do not think it will be done. But if that situation should arise it would have to be met in some way; you would either have to temporarily conscript some of the men there or send soldiers there, or send other people; I do not know what you would do.

Senator SHERMAN. We would have to do something.

Mr. STEVENS. Yes; you would have to do something.

Senator SHERMAN. And that is what appeals to Congress. We are facing that problem, and that is the motive for my inquiries.

Senator BANKHEAD. Mr. Stevens, I want to shift this scene and this argument to the subject of agriculture for a moment, and to farm labor.

Mr. STEVENS. I am a farmer myself, Mr. Bankhead.

Senator BANKHEAD. You look a good deal like one. [Laughter.]

Senator NELSON. So am I a farmer.

Senator BANKHEAD. Suppose it should develop in January or February, before the time for the planting of seed, that farm labor in this country was absolutely inadequate and insufficient to raise the necessary foodstuffs to feed our Army and our people, and to feed

our allies—would you think that there would be anything amiss if it should be considered necessary under those circumstances to conscript men to work on farms?

Mr. STEVENS. Well, it might work better south of Mason and Dixon's line.

Senator BANKHEAD. I am not talking about south of Mason and Dixon's line; I am talking about the country as a whole. Everybody has to eat in this country, and everybody has to be clothed in this country, as well as the people south of Mason and Dixon's line.

Mr. STEVENS. I think it would probably take about one man with a gun for every man with a scythe.

Senator BANKHEAD. You do?

Mr. STEVENS. Yes; and there would be considerable——

Senator BANKHEAD (interposing). Why do you think that? Farmers never strike; there is no such thing as a strike among the farmers; they have no sort of an organization of that kind.

Mr. STEVENS. Well, the farmer is not the man who must do the work; what is necessary is the labor of the hired man.

Senator BANKHEAD. I am speaking about the man who has to work on the farm. If it becomes necessary, in order to raise agricultural products so as to provide food for our armies and prevent a famine in this country, do you think that we should have conscription? I am not speaking about the man on the farm now; he is going to work anyhow. I am talking about the loafers; the men who are not subject to conscription, perhaps; there are hundreds of thousands of them in the country. Would you object to the Government, in an emergency of that sort, saying to those people, "You have got to get to work, and produce something that will help to feed these people."

Mr. STEVENS. If you could get a conscription law that would hit only the loafers, I would be in favor of it.

Senator BANKHEAD. Oh, yes.

Mr. STEVENS. But you can not get such a law without applying it to labor generally.

Senator BANKHEAD. Well, apply it to labor generally; it does not need to have any application to farmers, or the men who are engaged on the farms. But it might be necessary to take men who are engaged in outside industries, perhaps. That is the most important thing in this country—to feed the people—it is just as important as ships, or coal, or railroads, or armies; you can not get along without it.

Mr. STEVENS. I think that is true. I think there ought to be some committee on priorities in labor.

Senator BANKHEAD. Well, that is not the question. I wanted to know if you would object to some sort of a law that would force these people to go on the farms and work, if it is necessary in order to produce food; that is what I want you to answer.

Mr. STEVENS. I should be opposed to any form of conscription of labor.

Senator BANKHEAD. Yes; I understand.

Senator SHERMAN. Would you object to conscripting these I. W. W.'s?

Mr. STEVENS. No; but I do not think we should put them in the factories generally. [Laughter.]

Senator SHERMAN. No; I would not put them in the factories.

Senator BANKHEAD. Put them on the farms.

Senator SHERMAN. But put them out on the rock pile, where we could make them build good roads on which to haul our artillery to the front.

Senator HARDING. Mr. Stevens, I was very much interested in your appeal to sentiment. Have you settled any of your difficulties with an appeal to sentiment, or was there always accompanying it a raise of wage?

Mr. STEVENS. It is a good thing to have the two go together.

Senator HARDING. You do not answer my question. Did you settle any difficulties without any advance in wages?

Mr. STEVENS. Yes.

Senator HARDING. How many?

Mr. STEVENS. Well, I can think of one.

Senator HARDING. And how many controversies did you have?

Mr. STEVENS. Quite a good many. I could not figure them up now.

Senator JONES. Was that one that you settled a controversy over wages?

Mr. STEVENS. No; it was a controversy over whether a man should be employed as foreman or not. [Laughter.]

Senator HARDING. A very interesting question.

Senator BANKHEAD. I should like to ask one more question, Mr. Stevens. You stated awhile ago that you have had in operation since last February your 10 per cent bonus on the Pacific coast?

Mr. STEVENS. I did not quite understand your question.

Senator BANKHEAD. I understood you to say awhile ago that you had put in operation the 1st of last February your system of allowing 10 per cent bonus to the men continuously employed?

Mr. STEVENS. No; the bonus system was put in operation about a month ago.

Senator BANKHEAD. I understood you to say it was begun last February.

Mr. STEVENS. No; but it is operative until the 1st of next February; it began during the present month.

Senator BANKHEAD. I knew that the month of February had been mentioned.

The CHAIRMAN. I think this question finally comes back to the farmer, as Senator Bankhead has suggested, because if you raise the wages in all the industries, you will have also to raise the wage on the farm.

Senator BANKHEAD. Of course.

The CHAIRMAN. And that means a higher cost for the product. And then, if you have a board that fixes the prices which the farmer must charge for his product, and it does not fix any other prices, to what will that lead? The farmer will then apparently have to bear the burden after all.

Mr. STEVENS. Well, when I was running for Congress in New Hampshire, that is what I told the farmer he always did.

The CHAIRMAN. Well, I do not know. This, of course, is all rather outside the work of the Shipping Board.

If there are no further questions to be asked Mr. Stevens, we can now proceed with Admiral Bowles.

Senator BANKHEAD. Mr. Chairman, it is now after 5 o'clock; and of course if we begin with Admiral Bowles's statement we ought to proceed with it until we get through. I therefore suggest that we adjourn now until to-morrow afternoon.

Senator HARDING. I think, Mr. Chairman, that the limelight that this committee is turning on the shipping question ought to be kept on, and turned off as soon as we find it convenient to do so. I therefore suggest that we meet at 10 o'clock to-morrow morning and have a three-hour session, ending at 1 o'clock.

The CHAIRMAN. Yes. The funeral of Senator Newlands takes place at 3 o'clock to-morrow afternoon; and we will set a limit of 1 o'clock for to-morrow's session of the committee.

(Thereupon, at 5.15 o'clock p. m., the committee adjourned to meet at 10 o'clock a. m., Thursday, December 27, 1917.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

THURSDAY, DECEMBER 27, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 o'clock a. m. in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Nelson, Jones, Sherman, Harding, Calder, and Johnson.

Senator NELSON. Mr. Chairman, I submit herewith a list of questions in relation to strikes, etc., and I ask that the Shipping Board be requested to furnish to this committee a statement containing the information called for in these questions.

The CHAIRMAN. Have the members of the committee seen the list of questions?

Senator JOHNSON. Yes; we have seen it, Mr. Chairman.

The CHAIRMAN. In the absence of objection, the Shipping Board will be requested to furnish the information called for in the question list.

(The list of questions referred to is here printed in full, as follows:)

(1) What strikes, or threatened strikes, have there been in the shipbuilding industries, and in those industries furnishing supplies and equipment for ship construction, since the shipbuilding corporation has been organized and in operation?

(2) The yards or places where those strikes, or threatened strikes, have taken place.

(3) The number and class of men involved in each strike, or threatened strike, the nature and character of the controversy in each case, and the duration of the strike, or threatened strike, in each case.

(4) The character, nature, and terms of the settlement or arbitration, effected in each case.

(5) The period and scope of the delay in ship construction occasioned in each case of strike, or threatened strike.

The CHAIRMAN. We will now proceed with Admiral Bowles. Have you any preference as to the order in which you will make your statement, Admiral Bowles?

STATEMENT OF ADMIRAL F. T. BOWLES, MANAGER DIVISION OF STEEL-SHIP CONSTRUCTION, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

Admiral BOWLES. I have certain things to put in the record, Mr. Chairman, that have been asked for.

The CHAIRMAN. Very well.

Admiral BOWLES. I have handed in to the committee the reports of Mr. Charles M. Englis on the wooden shipyards that were asked for yesterday. The originals I handed to Senator Harding at his request, and I will now leave these copies [indicating] for the record.

Senator Nelson asked yesterday for a statement of the vessels building in the yards, in which Mr. Hannevig was interested. I have them here.

Senator NELSON. Well, that was not for the record, but simply for my own information.

Senator JOHNSON. May I ask, Mr. Chairman, whether or not the reports that have just been submitted by Admiral Bowles will be printed in the record?

The CHAIRMAN. Yes; they will be printed.

Senator HARDING. I suggest that that question go over until we have an opportunity to examine the reports.

Senator JOHNSON. It was not for that reason that I asked the question, but because various documents were submitted by the Admiral when he was last on the stand, and I do not think they were put in the record at all. There were some that I was looking for in examining the testimony of Saturday last, and I found that they had not been inserted. So I suggest that we pursue one or the other course as to all these documents, either that they all be inserted as a part of the record, or that none be inserted.

The CHAIRMAN. I understood that they were to go in the record.

Admiral BOWLES. I suggested that the contracts be not printed; the other things were all proper to go in the record.

The CHAIRMAN. I think there was something to be added on one or two of the statements; something to be filled in.

Admiral BOWLES. I do not know. I will complete those matters that I left incomplete at the last hearing this morning.

Senator JOHNSON. The clerk of the committee has just informed me, Mr. Chairman, that while I am correct in my statement as to the typewritten copy of the transcript of the record not containing the documents submitted by Admiral Bowles the other day, those documents have been included in the transcript sent to the Government Printing Office, and they will appear in the printed record of the hearings as exhibits.

Senator NELSON. I was just going to suggest that the statements that the admiral submitted at the former hearing and those which he submits to-day be placed all in one group in the final printed record. Would not that be a good plan?

Senator JONES. I was going to suggest that some of those things ought to appear and be read in connection with the statements he made at the time he submitted them.

The CHAIRMAN. Yes; I should think they should go in in the regular order in which they were submitted. The reports just submitted by the admiral can go in the record at this point.

Admiral BOWLES. I intended to say, Mr. Chairman, concerning these reports of Mr. Englis, that they were confidential reports made to me. and it is possible that there may be in them some things with

reference to particular shipyards which might be unwelcome, and therefore——

Senator HARDING (interposing). I thought it better for the members of the committee to see them before they were put in the record, Mr. Chairman. I had no desire to have them put in.

The CHAIRMAN. Perhaps it will be better, then, if we just have them filed with the committee, and the members of the committee can examine the copies which the admiral has furnished, and we can then determine later whether these reports are to go in the printed record.

(The reports referred to were subsequently ordered omitted from this record.)

Admiral BOWLES. Mr. Chairman, I would like to tell the committee that since my last testimony was given there have been three new ships launched, of which I have here [indicating] the record. They are the *Absaroka*, a Fleet Corporation contract vessel, built by Skinner & Eddy, at Seattle, of 8,800 dead-weight tons, which was launched December 22.

Senator NELSON. Is that a steel ship?

Admiral BOWLES. That is a steel ship. Then there are the *Broad Arrow*, built by the New York Shipbuilding Co., Camden, N. J., 12,600 tons, launched December 22; and the *War Unit*, built by the Standard Shipbuilding Corporation, of New York, 7,300 tons, launched December 22.

Senator NELSON. That makes seven vessels, then, with the other four that you mentioned the other day?

Admiral BOWLES. That makes five Fleet Corporation vessels. Two of these were requisitioned ships.

Senator NELSON. Two of those were requisitioned ships; that makes five, then.

Admiral BOWLES. A question was asked, Mr. Chairman, as to the requisitioned vessels that were completed from June 15 to July 10 and from July 11 to August 3, 1917, thereby escaping the requisition service. I have already handed in the list of six vessels for foreign owners, and I now hand in the list of vessels for domestic owners—16 vessels, of a total dead-weight tonnage of 153,187 tons.

The CHAIRMAN. That statement will be inserted in the record at this point.

(The statement referred to is here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 22, 1917.

Memorandum for vice president and general manager:

Referring to my memorandum of this a. m. covering foreign vessels which have been completed between June 15 and August 3, 1917, and the statement that further information in regard to American vessels would be furnished by Commissioner Chamberlin, this information has now been received and is given below:

Rig.	Name of vessel.	Gross tons.	Approximate dead-weight tons.	Net tons.	Type.	Length.	Breadth.	Depth.	Where built and owner.
	From June 15 to July 10, inclusive.					*Feet.*	*Feet.*	*Feet.*	
St. s.	Midvale	8,271	12,407	6,564	Freight	580.0	60.0	32.0	Ashtabula, Ohio, Great Lakes Engineering Works.
St. s.	Frank H. Goodyear	8,243	12,365	6,409	...do	580.0	60.0	27.9	Ecourse, Mich., Buffalo Steamship Co.
St. s.	Homer D. Williams	7,742	11,613	6,029	...do	580.0	60.0	32.0	Lorain, Ohio, Pittsburgh Steamship Co.
St. s.	Pennsylvania	6,666	9,999	5,048	Tank	416.8	56.1	31.1	Quincy, Mass., Texas Steamship Co.
St. s.	Tiger	6,273	9,410	3,832	Freight	410.0	56.0	29.0	San Francisco, Cal., Standard Transportation Co.
St. s.	Torres	4,943	7,415	2,955	Tank	371.5	59.1	26.8	Newport News, Va., Southern Pacific Co.
St. s.	Joseph Cudahy	3,302	4,953	2,027	...do	292.3	47.2	26.9	Baltimore, Md., American Italian Commercial Co.
	From July 11 to Aug. 3, inclusive.								
St. s.	W. C. Teagle	10,677	16,016	8,115	Tank	499.1	68.2	28.0	Sparrows Point, Md., Standard Oil Co.
St. s.	Gulf of Mexico	7,807	11,711	4,867	...do	467.6	62.7	32.0	Camden, N. J., Gulf Refining Co.
St. s.	Edw. L. Doheny, jr.	7,706	11,559	4,716	...do	467.6	62.7	32.0	Camden, N. J., Petroleum Transportation Co.
St. s.	Fredc. R. Kellogg	7,005	10,508	5,192	...do	425.8	57.0	31.4	Oakland, Cal., Petroleum Transportation Co.
St. s.	William Green	6,784	10,176	4,218	...do	430.0	58.2	33.3	Philadelphia, Pa., Petroleum Transportation Co.
St. s.	Virginia	6,666	9,999	5,048	...do	416.8	56.1	31.1	Quincy, Mass., Texas Steamship Co.
St. s.	El Almirante	5,216	7,824	4,055	Freight	364.0	51.2	23.8	Newport News, Va., Southern Pacific Co.
St. s.	Olean	2,783	4,175	1,647	...do	299.2	45.2	24.3	Wilmington, Del., Vacuum Oil Co.
St. s.	Kiowa	2,039	3,059	1,263	...do	251.0	43.5	20.0	Cleveland, Ohio, Atlantic Gulf & West Indies Steamship Line.

Total, 16 vessels; total approximate dead-weight tons, 153,189.

F. T. BOWLES,
Manager Division of Steel Ship Construction.

Admiral BOWLES. Are there any questions you desire to ask concerning that statement, Senator Johnson?

Senator JOHNSON. No; I simply wanted to examine it.

Admiral BOWLES. With reference to question 3, contained in the committee's resolution of December 20, and with reference to the answer that I presented as to the proportion of work done on each vessel up to the present time, I showed the committee the detailed diagrams upon which the record is kept; but I will now file with the committee a statement showing the percentage of completion of each vessel, both contract and requisitioned, wood and steel, complete. I will file that material in this book [indicating] if that is satisfactory to you, when I have finished my testimony.

The CHAIRMAN. Is there any objection to that statement going in the record?

Senator NELSON. No.

The CHAIRMAN. The statement just submitted will be inserted in the record.

(The statement referred to is here printed in full, as follows:)

SUMMARY OF PROGRESS REPORT.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 1, 1917.

The following pages are a summary of what has been accomplished in the way of ship construction by the Emergency Fleet Corporation.

Included is a table showing the number of vessels affected by the requisitioning order of August 3, and the present stage of completion.

Also included is a condensed report on each contract for wood, composite, and steel vessels, as of December 1, 1917.

The Emergency Fleet Corporation's shipbuilding program of December 1 was as follows:

Type.	Number.	Tonnage.
Wood and composite	437	1,551,900
Contract steel	527	3,638,400
Requisitioned steel	431	3,056,008
Total	1,395	8,246,308

The percentage of completion on wood vessels does not include the work that has been done by the purchasing division of this corporation in placing orders for equipment, nor is any allowance made for plans, patterns, castings, and machine work which has been furnished for the machinery equipment of these wood hulls.

It must be remembered that the percentages of completion given above do not fairly represent what has been accomplished by the Fleet Corporation. A great number of shipyards were nonexistent previous to the inception of the Emergency Fleet Corporation, and an enormous amount of work has been done in the preparation of these yards to build ships, of which no account is taken in the figures here given.

From a careful review of the situation we anticipate a production of 4,000,000 dead-weight tons of steel ships by this corporation during the year 1918. In addition there will be produced about 1,390,000 tons of wood and composite vessels.

The following contract vessels have been launched:

Contractor.	Number.	Type	Dead-weight tonnage.	Date.
Grays Harbor	1	Wood	3,500	Dec. 1, 1917
Knise-Banks	1	do	3,500	Dec. 15, 1917
Skinner & Eddy	1	Steel	8,800	Nov. 24, 1917
Los Angeles	1	do	8,800	Dec. 15, 1917

Of the 379 wood hulls which are under contract, keels have been laid for 166. This means that 44 per cent of the hulls are under construction. One hundred and thirty of the keels which have been laid are in yards which did not exist prior to April 17, 1917.

Ten keels for composite vessels have been laid in yards which were organized after receipt of their contracts with the Fleet Corporation.

Eleven keels have been laid for steel vessels, seven of which are in new shipyards.

PERCENTAGE OF COMPLETION OF COMPOSITE SHIPBUILDING PROGRAM.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 1, 1917.

Four contracts, totaling 58 composite ships, with dead-weight tonnage of 207,000, have been let. Of these 58 the keels for 12 have been laid.

In every case the contract is for a complete vessel, and the work performed to date represents about 20 per cent of this program.

For three of the four contracts it was necessary to build entirely new shipyards. The work of building these shipyards is not included in the above percentage, but this work has been carried on simultaneously with the preparation of plans and orders for vessels, and the three yards are now practically completed.

PROGRESS ON THE CONTRACT STEEL-SHIP BUILDING PROGRAM OF THE EMERGENCY FLEET CORPORATION.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 1, 1917.

On December 1, 32 contracts had been placed for steel vessels, totaling 520 ships and 3,638,400 dead-weight tons. Twenty of these 32 contracts have been placed with newly organized shipyards.

Keels have been laid for 11 vessels and the total amount of work done on the hulls and machinery represents 4 per cent of this program.

No credit is given in this percentage for the enormous amount of work done by the Fleet Corporation in preparing these 20 new yards for the building of ships.

PERCENTAGE OF COMPLETION OF WOOD-SHIPBUILDING PROGRAM.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 1, 1917.

On this date there were 379 hulls, with a total of 1,344,900 dead-weight tons, under contract.

The keels for 166 of these 379 vessels had been laid. This means that construction work had been begun on over 43 per cent of the total wood-shipbuilding program.

The first wood-ship hull, No. 55, building by the Grays Harbor Motor Ship Corporation, was launched December 1.

Actual wood-hull construction work done to this date represents about 9 per cent of the complete wood-hull building program. As in the majority of cases the contracts are for wood hulls only, and do not include machinery installation, no credit is given for designs, materials ordered or received, or work done on any of the machinery equipment.

The percentage of completion on the wood-ship program given above does not fully represent the amount of work done by the Fleet Corporation. In the 72 contracts for wood ships it was necessary to construct an entirely new shipyard in 51 instances. The fact that 166 keels have been laid shows that considerable progress has been made in this respect.

Of these 164 keels, 130 have been laid at yards which did not exist previous to the organization of the Emergency Fleet Corporation.

DECEMBER 17, 1917.

BUILDING PROGRAM PROGRESS.

All requisitioned vessels—Percentage of tonnage completed up to and including Nov. 30, 1917.

Builders.	Number of vessels.	Total dead-weight tons requisitioned.	Total dead-weight tons completed.	Total vessels and dead-weight tons reconveyed.[1]
District No. 1:				
Fore River	9	93,200	49,553	.....
Texas	13	120,300	37,963	.....
Total	22	213,500	87,516	.....
District No. 2:				
S. L. Moore	3	11,800	4,705	.....
Standard	13	94,900	33,288	.....
Staten Island	5	17,500	7,420	.....
Total	21	124,200	45,413	.....

[1] Reconveyed without having been accepted by Emergency Fleet Corporation.

All requisitioned vessels—Percentage of tonnage completed up to and including Nov. 30, 1917—Continued.

Builders.	Number of vessels.	Total dead-weight tons requisitioned.	Total dead-weight tons completed.	Total vessels and dead-weight tons reconveyed.
District No. 3:				
Baltimore	11	67,000	22,918	.....
Bethlehem	9	74,250	31,576	(6) 68,260
Harlan & H	12	70,110	34,759	.....
Newport News	9	87,910	62,570	.....
Pusey & Jones	14	58,800	11,022	.....
Total	55	358,070	162,845	(6) 68,260
District No. 4:				
Tampa	2	7,000	3,325	.....
Merrill-Stevens	1	6,500	.....	.....
Total	3	13,500	3,325	.....
District No. 7:				
Craig	2	6,000	3,660	.....
Hanlon	2	11,000	3,960	.....
Moore & Scott	7	63,500	42,033	.....
Union Iron	23	260,000	113,683	(1) 10,000
Total	34	340,500	163,336	(1) 10,000
District No. 8:				
Albina	6	21,800	9,023	.....
Ames	13	113,900	30,744	.....
Columbia River	10	88,000	17,952	.....
Duthie	12	105,600	34,232	.....
Seattle	12	93,000	28,080	.....
Skinner & Eddy	8	70,600	47,298	.....
Willamette	14	123,200	36,872	(1) 8,800
Total	75	616,100	204,201	(1) 8,800
District No. 9:				
American	33	104,300	74,106	(5) 49,300
Globe	4	14,000	2,135	.....
Great Lakes	30	106,300	48,170	(1) 13,000
Manitowoc	14	48,400	25,534	.....
McDougall-D	9	28,300	9,007	.....
Toledo	9	26,370	16,877	(1) 2,930
Total	99	327,670	175,829	(7) 65,230
District No. 10:				
Chester	28	248,200	62,025	.....
Cramp	9	61,758	28,652	.....
New Jersey	12	60,000	.....	.....
New York	23	184,620	103,633	.....
Pennsylvania	19	194,500	38,655	.....
Sun	16	161,100	65,151	.....
Total	107	910,178	298,116	.....
Summary by districts:				
No. 1	22	213,500	87,516	.....
No. 2	21	124,200	45,413	.....
No. 3	55	358,070	162,845	(6) 68,260
No. 4	3	13,500	3,325	.....
No. 7	34	340,500	163,336	(1) 10,000
No. 8	75	616,100	204,201	(1) 8,800
No. 9	99	327,670	175,829	(7) 65,230
No. 10	107	910,178	298,116	.....
Total	416	2,903,718	1,140,581	(15) 152,290
Reconveyed	15	152,290	.....	.....
Grand total	431	3,056,008	.....	.....

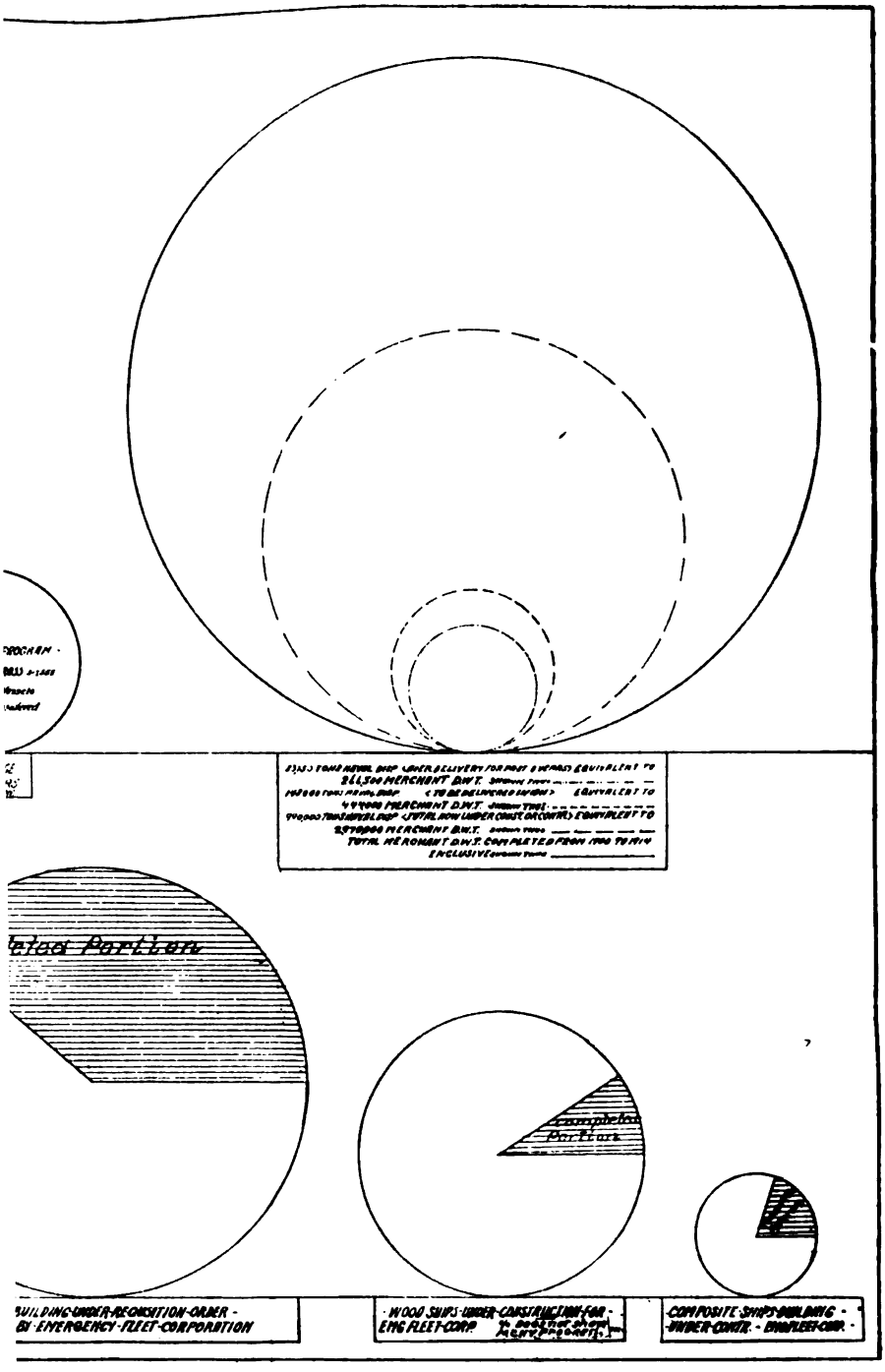
List showing number of keels of requisitioned vessels laid before requisitioning order of Aug. 3, the number of keels laid since that date, and the number of keels still remaining to be laid.

Companies.	Vessels requisitioned.	Before.	Since.	Not laid.
Fore River	9	4	2	3
Texas	13	4	2	7
Moore & Sons	3	3	.....	.....
Standard	13	3	2	8
Staten Island	5	2	1	2
Baltimore	11	3	2	6
Harlan & Hollingsworth	12	5	2	5
Maryland	15	8	3	4
Newport News	9	5	2	2
Pusey & Jones	14	4	1	9
Tampa	2	1	1	.....
Craig	2	2	.....	.....
Hanlon	2	.....	2	.....
Moore & Scott	7	4	3	.....
Union Iron	24	7	5	12
Albina	6	4	2	.....
Columbia	10	3	2	5
Ames	13	4	2	7
Duthie	12	4	2	6
Seattle	12	4	2	6
Skinner & Eddy	8	4	4	.....
Willamette	15	4	3	8
American	38	21	17	.....
Globe	4	1	.....	3
Manitowoc	14	5	2	7
Great Lakes	31	10	6	15
McDougal-Duluth	9	3	3	3
Toledo	10	5	4	1
Chester	28	6	6	16
Cramp	9	4	3	2
New York	23	7	5	11
Pennsylvania	19	6	3	10
Sun	16	4	4	8
Merrill-Stevens	1	.....	.....	1
New Jersey	12	1	3	8
Total	431	158	101	172

Eighty launched.

List of requisitioned vessels for which district officers did not show percentage complete of whole ship for the period ending Nov. 30, 1917.

District number.	Company.	Hull number.	Tonnage.
1	Fore River Shipbuilding Co.	297	14,000
		298	14,000
	Total	2	28,000
1	Texas Ship Co	12	9,500
		13	9,500
		21	9,800
		22	9,800
		23	9,800
		24	9,800
	Total	6	58,200
3	Harlan & Hollingsworth	450	4,500
		451	4,500
	Total	2	9,000
3	Pusey Jones	1,009	4,350
		1,010	4,350
		1,011	4,350
		1,012	4,350
		1,013	4,350
		1,014	4,350
	Total	6	26,100


MERCHANT D.W.T.
MERCHANT D.W.T.
MERCHANT D.W.T.
TOTAL MERCHANT D.W.T. COMPLETED FROM 1900 TO 1914
INCLUSIVE
Completed Portion
Completed Portion
BUILDING UNDER RECOMMISSION ORDER - BY EMERGENCY FLEET CORPORATION
WOOD SHIPS UNDER CONSTRUCTION FOR EMG FLEET CORP
COMPOSITE SHIPS BUILDING - UNDER CONTR. - EMG FLEET CORP.

List of requisitioned vessels for which district officers did not show percentage complete of whole ship for the period ending Nov. 30, 1917—Continued.

District number.	Company.	Hull number.	Tonnage.
4	Merrill-Stevens	1	6,500
8	Albina Engine & Machine Works	6	3,800
8	Ames Shipbuilding & Dry Dock Co	12	8,500
8	Columbia River	5	8,800
		6	8,800
		7	8,800
		8	8,800
		9	8,800
		10	8,800
	Total	6	52,800
8	Duthie Shipbuilding Co	11	8,800
		12	8,800
		16	8,800
		18	8,800
		19	8,800
		20	8,800
	Total	6	52,800

Admiral BOWLES. For the information of the committee, I have prepared this diagram [indicating], which I had occasion to show you when I presented my last testimony, but which I was obliged to withdraw because I had included in it a diagram showing the amount of tonnage which it was anticipated would be completed during the year 1918. That I have now eliminated from the diagram, and with the permission of the committee I will put it in the record as it is.

Senator NELSON. That can be printed in the record, too.

The CHAIRMAN. Yes; that can be printed in the record; but it would be very difficult and expensive to reproduce the colors shown on the diagram.

Admiral BOWLES. Well, that can be done by hatching, without being printed in colors.

The CHAIRMAN. Then the diagram will be inserted in the record at this point, with the different colors represented by different kinds of hatching.

(The diagram referred to is here printed in full on facing page.)

Admiral BOWLES. Perhaps the committee would like to have me explain one or two things with regard to this diagram.

The CHAIRMAN. Yes; we will be glad to have you do that.

Admiral BOWLES. In the left-hand corner of the diagram the circle represents in area the total dead-weight tonnage contracted for by the Fleet Corporation, as well as the total dead-weight tonnage of the vessels under requisition building in private yards.

The small circle, showing the average shipbuilding of the United States, represents the average of merchant vessels built in the United States, for both ocean and lake traffic for 15 years. The large circle in the right-hand upper corner of the diagram is 15 times that last; that is, it represents 15 times the average annual production of merchant ships in the United States. And you can see that it is almost precisely the same in diameter as the circle representing the total program of the Fleet Corporation.

Now, within this large circle [indicating] on the right-hand upper corner of the diagram are three dotted circles. The smaller one represents the average tonnage produced for the Navy and the next largest circle represents the tonnage to be produced for the Navy in the year 1917.

Senator NELSON. You mean 1918, do you not?

Admiral BOWLES. No, sir; I mean 1917. The largest dotted circle represents the total authorized tonnage for the Navy at the present time, but we have no information as to when it is to be completed.

These tonnage circles, representing the Navy's program, are converted into dead-weight tonnage by applying the factor to the displacement tonnage, in which all the records of the Navy are kept.

Senator NELSON. Right here let me ask you this question: What is the difference between displacement tonnage, gross tonnage, and dead-weight tonnage? You used the term "displacement tonnage." I have noticed that frequently, but I have never known what displacement tonnage meant.

Admiral BOWLES. Displacement tonnage is the actual weight of the vessel in tons of 2,240 pounds; and for Navy vessels it represents the displacement of the vessel completed, with armor, guns, ammunition, and crews, stores, and fuel—in what is called the normal condition.

Is there any further explanation of the diagram desired, Mr. Chairman?

Senator NELSON. Well, if you care to make further explanation about these other circles in the diagram, we should like to hear about them.

Admiral BOWLES. The smallest circles I explained in my previous testimony. The one in the right-hand corner—the smallest one—represents in area the dead-weight tonnage of composite vessels under construction, and the hatched sector represents the proportion of the work already completed.

The next circle represents the tonnage of wooden vessels under contract, and the hatched portion represents the proportion of the wooden vessels completed.

The next circle (No. 3) represents the dead-weight tonnage of requisitioned vessels building in private yards, and the hatched sector the proportion of that work completed at the present time.

Senator NELSON. That is this one [indicating]?

Admiral BOWLES. Yes, sir; the next one, being fourth from the right-hand corner, represents the tonnage of steel vessels under contract with the Fleet Corporation; and the hatched sector the completed portion of the whole.

Senator NELSON. The next circle?

Admiral BOWLES. The next circle being the one in the left-hand corner represents the total program of the Fleet Corporation; that is, all vessels under contract, both wood, steel, composite, and requisitioned, all added together. And the hatched portion represents the proportion of the work completed in the whole program.

Admiral BOWLES. I promised to submit an analysis of the contracts made with the Emergency Fleet Corporation, each one of which has been submitted; and I now submit this table [indicating], giving a general idea of the classes of contracts used by the United States Shipping Board Emergency Fleet Corporation, with their

salient terms. The summary shows a total of 149 contracts, being 3 more than was shown on the detailed table which I submitted before. These 3 were contracts that were executed since December 20, and the details of those I will supply.

This summary shows that of the total number of 149 contracts 130 are lump-sum contracts; 15 are cost-plus contracts, divided into two groups—one with the guaranteed fee and the other with the sliding scale. There are 4 agency contracts. They total 149.

Now, this table [indicating] gives the principal features of the lump-sum contracts, and mentions the contracts by number that come under this heading, and states whether they are of wood or of steel.

Senator CALDER. Does it state the name of the contractor and the place where the ships are being built?

Admiral BOWLES. That was contained in the list that was submitted by me on the first day that I testified.

Senator JONES. I suggest that you read to the committee the analysis of one contract as an illustration.

Admiral BOWLES. I thought, Senator Jones, that the most interesting analysis would be that of one of the agency contracts. Of course, the lump-sum contracts are comparatively simple. In the majority of lump-sum contracts, the contractor furnishes his own plant. In some cases in these contracts he receives some advance payment to assist him in the completion of his plant. But you will see that the large majority of our contracts are on the ordinary commercial basis.

Senator NELSON. Will you let me ask you a question right there in that connection, Admiral Bowles? What portion of these contracts were made with existing shipyards, and what proportion of contracts involved the building of a shipyard in the first instance—before any work could be done?

Admiral BOWLES. I stated in my previous testimony that the contracts had been placed with 132 different shipyards, of which 36 were old yards and 74 were new yards.

Senator NELSON. To be built—to be constructed?

Admiral BOWLES. Yes; 74 to be new yards to be constructed. Now, I would like to correct my first statement. It was 110 shipyards that our contracts have been placed with. The number 132 comes from including these requisitioned vessels building in other shipyards.

Senator NELSON. Yes. Now, in these 74, you speak of, there was no shipyard in existence; the contract involved the construction of a shipyard in the first instance, did it not?

Admiral BOWLES. Yes.

Senator NELSON. And the Government advanced the money for it?

Admiral BOWLES. In some cases it did, and in some cases it did not.

Senator NELSON. Well, where the Government advanced the money, what was the principle that governed the board? What portion? Did they advance the entire sum needed?

Admiral BOWLES. In some cases the entire sum needed was supplied by the Government, and in that case the cost of constructing the shipyards was limited by the Fleet Corporation and was distributed over the whole cost of the ships.

Senator NELSON. Where were those cases where the whole amount was advanced by the Government? Can you give those localities and places by that?

Admiral BOWLES. This analysis [indicating] will show that.

Senator NELSON. Or, rather, how many were there of these contracts?

Admiral BOWLES. There were very few, and they have been very troublesome.

Senator NELSON. I should think so.

Admiral BOWLES. Would it be agreeable to the committee if I reply to that question at a later time, because it is a very difficult subject.

Senator NELSON. Certainly; I can see that.

The CHAIRMAN. You can insert your answer to that question when the printed proof comes to you.

Admiral BOWLES. I will do so, Mr. Chairman.

(The statement referred to by Admiral Bowles was submitted by Mr. Hurley and will be found printed in full on page 327.)

The CHAIRMAN. Do the lump-sum contracts contemplate the full completion of the ship—the hull, machinery, and everything?

Admiral BOWLES. Not always. The contracts for wooden vessels were let for the hull alone. But this analysis [indicating] will show in every case exactly what was contracted for.

The CHAIRMAN. Where you use the term "completed ship," does that include machinery and everything ready for service?

Admiral BOWLES. Yes.

The CHAIRMAN. Without objection, the statement as to classes of contract used by the Fleet Corporation will be inserted in the record of to-day's hearing.

(The classes of contracts referred to are here printed in full, as follows:)

TABLES GIVING A GENERAL IDEA OF THE CLASSES OF CONTRACTS FOR HULLS AND VESSELS AND OF THEIR SALIENT TERMS.

[NOTE.—The Emergency Fleet Corporation is in all cases referred to as the "owner." In the *agency* contracts, the contractor is referred to as the "agent."]

Table 1.—Classes of contracts.

The contracts are of three general classes, as follows:

		Number.
Lump-sum contracts		130
Cost-plus contracts		15
(*a*) With guaranteed fee	9	
(*b*) With sliding-scale fee	6	
Agency contracts		4
Total		149

LUMP-SUM CONTRACTS.

NUMBER OF LUMP-SUM CONTRACTS.

The lump-sum contract is the type of contract most frequently used. They are as follows:

	Number contracts.
(A) Wood hulls.—Contracts Nos. 7–8, 15–17, 19–21, 24, 27, 35–39, 41, 45, 46, 49–52, 55, 56, 58, 59, 62, 64–72, 74–82, 84–85, 88–90, 96, 148	53
(B) Complete wood steamers.—Contracts Nos. 3 6, 22, 25, 32, 143	6

	Number contracts.
(C) Composite wood and steel steamers.—Contracts Nos, 1, 9, 31, 41	4
(D) Complete steel steamers.—Contracts Nos. 2, 4, 10, 13, 18, 26, 30, 33, 48, 57, 61, 63, 92–95, 97–142, 144–146, 149	66
(E) Steel barge.—Contract No. 42	1
Total	130

In wood-hull contracts the contractor's work is completed when he delivers the wood hull afloat his works.

TERMS IN GENERAL.

(For details, see Table 2.)

Purchase price.—The purchase price is a lump-sum price for the hull or vessel delivered afloat at contractor's works. The price is subject to variations accordingly as there are (*a*) alterations in plans and specifications, (*b*) provisions for the protection of contractor against increase in price of labor and material, (*c*) premiums for expedition and liquidated damages for delay, (*d*) decrease due to waiver of insurance on vessels.

Payments.—The payments are divided into three classes: (*a*) First payments, which are substantially always in the nature of advance payments, and the expenditure thereof is (at the present time) restricted to the construction of vessels only, though in proper cases a proportion thereof may, under suitable restrictions, be permitted to be expended in construction of plant; (*b*) subsequent or progress payments, which are paid as certain stages in the progress of the work are reached; (*c*) final payments, which are paid after acceptance of vessel.

Premium and liquidated damages.—Most of the contracts contain clauses providing for the payment of a per diem bonus or liquidated damages (limited to a specified aggregate per hull or vessel) according as the delivery of the hulls or vessels is advanced or retarded to the scheduled delivery dates.

Plant.—In nearly all of the contracts the contractor himself finances the erection of the plant. In some of the early contracts, the contractor might have used the first payment for this purpose. Under present contracts, the contractor is at times permitted to use part of the first payment for plant construction or extension under restrictions looking to the proper application thereof. Occasionally the owner makes a loan for these purposes against security.

Other general terms.—The contracts contain terms covering deliveries, trials, inspection, alterations, delays due to causes beyond control, insurance, settlement of disputes, title to work in progress and materials, time of essence, precedence to be given to the work under the contract, liens and taxes, claims and patents, control of wages and conditions of labor, Member of Congress clause, prohibition against assignments, forfeiture and right to take over plant if work unsatisfactory, and, in the more recent lump-sum contracts, cancellation if progress of work unsatisfactory, and provisions giving auditors access to contractor's books.

COST-PLUS CONTRACTS.

(*a*) Guaranteed-fee type; (*b*) Sliding-scale fee type.

(A) GUARANTEED-FEE TYPE OF COST-PLUS CONTRACT.

NUMBER OF GUARANTEED-FEE CONTRACTS.

Contracts of this type for wood hulls are Nos. 11, 12, 29, 43, 47	5
Contracts of this type for wood completed vessels are Nos. 5, 23, 34, 40	4
Total cost-plus, guaranteed-fee contracts	9

These were all early contracts, the last one being executed on the 21st of July, 1917.

TERMS IN GENERAL.

(For details see Table 2.)

Purchase price.—The owner pays the cost and a fixed fee. The cost includes the cost of plant or extensions authorized by owner. The fee is guaranteed and limited to a certain sum, usually $20,000 in the case of wood hulls and $40,000 in the case of wooden steamers. In one case, however, in addition to the guaranteed fee, the contractor was allowed any saving under an estimated cost (contract 40).

Plant.—The cost of the constructed plant is included in and spread over the cost of the vessels and the plant so constructed belongs to the owner. Usually the contractor has option to purchase the improvements at an agreed valuation. The establishment of plant or of any additions thereto are within the owner's control. The owner usually (outside the contract) fixes a limit of expenditure on plant to what the owner deems reasonable.

Subcontracts and commitments.—The owner has complete control over all orders and commitments. The orders are given and contracts made by the contractor in the owner's name.

Payments.—Payments are made as follows: (*a*) of items of cost, within 15 days after submission of bills and pay rolls covering approved cost for previous manufacture; (*b*) of fee, within 30 days after acceptance of a hull or vessel.

Bonus and liquidated damages.—One contract of this class (No. 12) has a provision placing a premium upon early deliveries or assessing liquidated damages for retarded deliveries of $200 a day; the total premium or liquidated damages not to exceed $10,000 per hull.

Other general terms.—Contains clauses for audit and examination of contractor's record; otherwise substantially as in lump-sum contracts, except that the cancellation clause is not included.

(B) SLIDING-SCALE FEE TYPE OF COST PLUS CONTRACT.

NUMBER OF SLIDING-SCALE FEE CONTRACTS.

Contracts of this type are as follows: For wood hulls, Nos. 14, 28, 53, 54, 60, and 73; total, 6.

This type of contract was an early type, no contracts of this kind, except Nos. 60 and 73, having been executed since the middle of July and as to those contracts the commitments had been made prior thereto.

TERMS IN GENERAL.

[For details see Table 2.]

Purchase price.—The owner pays actual cost plus a sliding-scale fee.

The contract contains an estimated base cost of each vessel, which may vary according (*a*) to alterations directed by owner; (*b*) to protection on labor and materials. The cost includes the amount expended for plant.

Fee.—The contractor receives a specified normal fee if the estimated cost equals the actual cost.

(*a*) If the actual cost is less than the estimated cost, the fee is increased by one-half of the saving.

(*b*) If the actual cost exceeds the estimated cost, the fee is decreased by the excess to the extent of the normal fee (in other words, until the fee is wiped out).

(*c*) The owner bears any excess of actual overestimated cost plus contractor's normal fee.

Plant.—The amount expended by the owner for plant is spread over all of the vessels. The plant or the additions to the plant, paid for by the owner, belong to the owner. Those paid for by the contractor, generally speaking, belong to the contractor. The contractor usually has the option to purchase the construction or equipment paid for by the owner at an agreed valuation. In some cases all of the plant construction or extension, authorized by the owner, is paid for by the owner; in others (for example, 14, 60, and 73) the amount to be expended on the plant is limited in the contract. Where no limit is named in the contract, the owner imposes a reasonable limit.

Subcontracts and commitments.—The owner has full supervision over subcontracts and commitments.

Payments.—Payments are usually made as follows: Of items of cost, monthly within 15 days after submission of approved bills; of fee, after the acceptance of a hull.

Premium and liquidated damages.—No provision, except in contract No. 60, which provides for a premium of $10,000 per hull if all hulls are delivered before scheduled date—which provision is in lieu of an allowance for certain executive salaries as a part of the cost.

Other general terms.—Same as in fixed-fee type.

AGENCY CONTRACTS.

NUMBER OF CONTRACTS.

These contracts are for fabricated vessels from 5,000 to 9,000 tons D. W. C., with the Submarine Boat Corporation, American International Corporation, the Merchant Shipbuilding Corporation, and the Newburgh Shipyards (contracts 83, 86, 87, 91).

TERMS IN GENERAL.

[For details see Table 2.]

Purchase price.—The owner pays (*a*) cost of vessel; (*b*) agent's fee; and in all of the contracts except 9, (*c*) cost of construction or extensions to plant.

Cost.—Cost includes the rent of real estate (except in contract 91), but does not include executive salaries of the agent. The contract contains an estimated base cost of the vessels to be constructed. This estimated base cost (which does not include cost of plant) is subject to increase or decrease because of the following: (*a*) wages varying from schedule; (*b*) cost of material varying from schedule; (*c*) changes due to alterations; (*d*) compliance with owner's instructions as to wages or conditions of labor; (*e*) decrease if insurance is dispensed with.

Fee.—The agent receives for his services the following compensation:

A normal specified fee if actual cost of vessels equals estimated cost. The normal fee is increased for economies in time or saving cost and decreased (but not below a specified minimum fee) for delays or excess cost.

Plant.—The land is owned by the contractor, except in one case (contract 86) where it is owned by the city of Newark.

Except in contract 91, the plant is constructed at the owner's expense. Where so constructed, the plant belongs to the owner, the owner having the option to purchase the land. The owner has imposed a limit upon the cost of plant in each case. In contract 91, the agent owns the plant. The owner advances $500,000 to extend the plant, takes a mortgage on the plant as security for the repayment of the $500,000 and has the right to deduct the amount so advanced from the agent's fees when and as earned.

Payments.—Of cost: (*a*) Payments are made out of funds deposited by the owner in a trustee account, upon checks countersigned by the owner's representatives. The proper application of these funds is further secured (except in contract 91) by the giving of a bond (either of a surety company or secured by a mortgage on plant). (*b*) Some outside expenses are paid by the owner monthly 15 days after the submission by the agent of approved bills.

Of fee: One-half of the minimum fee is paid as each vessel is half completed; one-half of the minimum fee as each vessel passes a satisfactory trial; the balance of fee, if any, upon the audit of the actual cost per vessel.

Subcontracts and commitments.—The owner has complete control of all subcontracts and commitments and of every detail of the work, and the agent is bound to serve and protect the owner's interests at all times.

Premium and liquidated damages.—Each contract contains a clause increasing or decreasing the fee accordingly as delivery is advanced or retarded.

Extra work.—Owner may use plants (except in 91) to install machinery and equipment in wood hulls, or may make agent do so at agreed price.

Other general terms.—Substantially same as in later lump-sum contracts.

TABLE 2.—*Analysis of salient terms of contracts.*

[The terms analyzed are the financial ones. The "General Terms" referred to in Table 1 are not analyzed.]

OUTLINES OF THE SALIENT CLAUSES IN THE FOUR TYPES OF CONTRACT.

PURCHASE PRICE.

1. IN LUMP-SUM CONTRACTS.

The purchase price is a lump-sum price for the hull or vessel delivered afloat at Contractor's works. The price is subject to variations accordingly as there are (A) alterations in plans and specifications; (B) provisions for protection of Contractor against increase in price of labor and material, or provisions giving the Owner the benefit of any saving; (C) premiums for expedition; liquidated damages for delay; (D) decrease due to waiver of insurance.

A. The Owner may direct the making of alterations in the plans and specifications. These alterations may increase or decrease the cost of construction. The lump-sum purchase price will be increased or decreased accordingly.

B. *Protection on labor and materials:*

(1) Labor.

(a) Substantially all contracts require the Contractor to obey the instructions of the Owner as regards wages and conditions of labor and provide that any increase due to these instructions shall be added to the lump-sum cost.

(b) Many contracts protect the Contractor against increase in wages (not caused by Owner's orders) above certain schedule rates.

(c) Some of the late steel ship contracts protect against increase in wages (not caused by Owner's orders) accordingly as Contractor's profit is reduced thereby to 10% of the contract price or below.

(2) Materials.

(a) Most of the earlier contracts protect the Contractor against advances in the cost of lumber in excess of a certain price.

(b) Some of the contracts protect the Contractor against increases in the price of materials, for example, metal fastenings, oakum, iron bars, etc., above schedule price.

(c) Some few contracts protect the Contractor against increases in freight rates.

(d) In some of the contracts the Owner agrees to supply specified materials and gets the benefit of any saving.

(e) In present steel ship contracts the Owner furnishes the steel at an estimated price, the adjustment for the difference between actual and estimated cost being made in the final payments.

(f) In present steel ship contracts Owner has option to furnish propelling machinery, auxiliaries, boilers, etc., any saving under prices, submitted by Contractor, going to Owner.

(3) In the wood hull contracts executed after the middle of July, the protection upon labor and lumber was only available to the extent that the increase due to the causes provided against brought the cost above a certain figure—usually $265.000 to $275,000 for Ferris-type hulls and $255,000 to $260,000 for Hough-type hulls.

C. *Premium and liquidated damages.*—Most of the contracts contain clauses providing for the payment of a bonus or liquidated damages accordingly as the delivery of the hulls or vessels is advanced or retarded beyond the scheduled delivery dates. The bonus or penalty amounts to $200 per day for wood hulls, but has a specified limit ranging from $10,000 to $15,000 and sometimes $20,000 per hull; for completed steel vessels, it is $300 per day with a specified limit ranging from $15,00 to $25,000 per vessel.

D. *Savings on insurance.*—The contracts require the Contractor to insure the interest of the Owner in the hulls or vessels, materials, and supplies. About the beginning of July the contracts gave the Owner the right to place this insurance directly and the Owner was entitled to any saving under the Contractor's estimate. Later contracts provide that the Owner may waive the insurance, and deduct the saving from the purchase price.

II. IN GUARANTEED FEE TYPE OF COST PLUS CONTRACT.

Purchase price.—The Owner pays the cost and a fixed fee.

Cost.—The Owner pays the actual cost, which includes the cost of plant or extensions authorized by Owner; cost is defined in the contract, following so far as applicable the definition in the Munitions Manufacturers' Tax Law.

Fee.—The Owner pays a fixed fee, which is guaranteed to be a certain sum, usually $20,000 in the case of wood hulls and $40,000 in the case of wooden steamers. In one case, in addition to the guaranteed fee, the Contractor was allowed any saving under an estimated cost (Contract 40).

Alterations.—The owner may alter the plans and specifications. The effect of the alteration, if the parties do not agree, is settled like other disputes under the contract.

Protection on labor and material.—Since the contractor's fee is guaranteed and limited, there is no protection on labor and material.

Premium and liquidated damages.—Only one contract of this class (No. 12) has a provision placing a premium upon early deliveries and liquidated damages for retarded deliveries of $200 a day, not exceeding $10,000 per hull.

III. IN SLIDING SCALE FEE TYPE OF COST PLUS CONTRACT.

A. *Purchase price.*—The owner pays actual cost plus a sliding scale fee, which is increased or diminished as stated.

Cost.—Cost is defined in the contract, following so far as applicable, the definition of cost in the munitions manufacturers tax law. The contract contains an *estimated* base cost which may vary according (a) to alterations directed by owner; (b) to protection on labor and materials similar to that in the lump-sum contracts.

The cost includes the amount expended for plant, which is thus charged to and spread over all of the vessels.

Fee.—The contractor receives a normal fee if the estimated cost equals the actual cost. (a) If the actual cost is less than the estimated cost, the fee is increased by one-half of the saving; (b) if the actual cost exceeds the estimated cost, the fee is decreased by the excess up to the amount of the normal fee (in other words until the fee is wiped out); (c) the owner bears any excess of actual over estimated cost plus contractor's normal fee.

In one contract (No. 73), the contractor gets one-half of the saving up to a certain point and bears any excess beyond that point.

Premium and liquidated damages.—None except in contract 70, where a premium of $10,000 for each vessel delivered before scheduled date is provided for, in lieu of any allowance for certain executive salaries as part of cost.

IV. IN AGENCY CONTRACTS.

The owner pays (A) cost of vessel; (B) agent's fee; and in all of the contracts, except 91, (C) cost of construction or extensions to plant.

A. *Cost:*

(1) Actual cost: The elements of actual cost are defined in the contracts. They include the rent of real estate (except in contract 91), but do not not include executive salaries of the agent.

(2) Estimated cost: The contract contains an estimated base cost of the vessels to be constructed. This estimated base cost (which does not include the cost of plant) is subject to increase or decrease because of the following: (a) Wages varying from schedule; (b) cost of material varying from schedule; (c) changes due to alterations; (d) compliance with owner's instructions as to wages or conditions of labor; (e) decrease if insurance is dispensed with.

B. *Fee.*—The agent receives for his services the following compensation:

(1) A normal specified fee if actual cost of vessel equals estimated cost;

(2) The normal fee is *increased* by the following: (a) One-third of any saving if the actual cost per vessel is less than the estimated cost; (b) a premium of usually $300 per day for delivery in advance of schedule ($500 for troop vessels under contract 83), not exceeding a specified average sum per vessel.

(3) The normal fee is *decreased* by the following: (a) One-half of the excess if the actual cost per vessel exceeds the estimated cost; (b) losses caused by neglect of agent's executive or managers, not exceeding a specified average amount per vessel; (c) liquidated damages for delay, usually $300 per day ($500 for troop vessels under contract 83) and not exceeding a specified average sum per vessel; (d) the deductions, however, are not to reduce the average fee below a specified *minimum* fee for each vessel.

C. *Cost of plant.*—(See heading "Plant").

PAYMENTS.

I. IN LUMP-SUM CONTRACTS.

The payments are divided into three classes: (A) First payments, which are substantially always in the nature of advance payments; (B) Subsequent or progress payments; (C) Final payments.

A. The *first payments* are usually made payable 30 days after the execution of the contracts and usually constitute 10% of the total purchase price of all of the hulls or vessels.

There are exceptional contracts providing for larger first payments.

The first payments were, in the early days of the corporation, subject to no restrictions. Thereafter they became subject successively to the following restrictions:

(1) That the contractor must show, before a payment would be made, that he had expended or had made committments for labor and/or materials equal to the first payment.

(2) Thereafter a restriction was added that the first payment should be used (except in a few specified instances) only for the construction of the hulls and not for the construction of plant.

(3) Frequently in contracts executed after the middle of July is found the requirement that the contractor must have a specified number of ways completed before the first payment would be made.

(4) From the end of July onwards, the contracts usually provided that the first payment was not to be made except upon a showing of *cash paid out* for labor and/or materials used or on hand for use in the construction of hulls; and it was further restricted in that the first payment should be used exclusively for the construction of hulls, and not for the construction of the plant.

(5) Other forms of restrictions used since the end of July and in use at the present time are:

(a) The placing of the first payment in a trustee account, title to which is in the owner, the monies being withdrawn therefrom only upon the countersignature of the owner's representatives and used only for the construction of hulls (though, in some cases, the contract permits a certain proportion of the money to be used under certain restrictions for plants).

(b) The contractor is required to give a bond with a satisfactory surety, or secured by a mortgage upon its plant to secure the proper application of the first payment.

B. The *subsequent or progress payments* are to be made as certain stages in the progress of the work are reached but only if, when those stages are reached, the value of the work constructed and of the materials on hand (as certified by the owner's inspectors) equals the proportion of the first payment applicable to the particular vessel, plus all prior payments made on such vessel plus the payment then due.

Subsequently, since August, 1917, a clause has been adopted, making the progress payments applicable when a certain stage in the progress of the work, or its equivalent in work done and value of materials on hand, is reached, the payment not to exceed the value of the work done and materials on hand.

In some of the contracts in present use, where part of the first payment is permitted to be expended by the contractor for plant, a certain proportion thereof is allowed to be computed against each vessel in estimating progress payments.

C. The *final payment* on each hull or vessel is usually payable upon, or 30 days after, acceptance by the owner.

II. IN GUARANTEED FEE TYPE OF COST PLUS CONTRACT.

Payments are made as follows:

(1) Of items of cost, within fifteen days after submission of bills and payrolls covering approved cost for previous month.

(2) Of fee within thirty days after acceptance of a hull or vessel. In some cases one-half of the fee is payable when the vessel is launched and the other one-half when it is accepted.

III. IN SLIDING SCALE FEE TYPE OF COST PLUS CONTRACT.

Same as in guaranteed fee type.

IV. IN AGENCY CONTRACTS.

Of cost.—(1) The owner pays money into a trustee account, title to which is in the owner. The money may be withdrawn only upon checks countersigned by the owner's representatives. Such moneys are used to meet the current expenditures under the contract. The proper application of these funds is further secured except in contract 91 by a bond (either of a surety company or secured by a mortgage on plant).

(2) Some outside expenses are paid by the owner monthly, fifteen days after the submission by the agent of approved bills.

Of fee.—One-half of the *minimum* fee is paid as each vessel is half completed; one-half of the *minimum* fee as each vessel passes a satisfactory trial: the balance, if any, upon the audit of the actual cost per vessel.

PLANT.

I. IN LUMP-SUM CONTRACTS.

(*a*) 1. In one of the early lump-sum contracts, the contractor erected a certain part of ways and owner purchased upon their completion. The contractor had the right to repurchase after the termination of the contract, at a price to be agreed upon.

2. The first payments in the earlier contracts were not restricted in their use to the construction of vessels and, hence, might have been used by the contractor for plant construction.

(*b*) Under the present forms of contract—

(1) The owner frequently permits part of the first payment to be used for the construction of plant, ways, etc.

(*a*) In some cases, this is qualified by the requirement that contractor furnish an equal amount to be used in the construction of ways, etc.

(2) The proper application of these funds is secured—

(*a*) Either by putting the money in a trustee account subject to be withdrawn only upon the countersignature of the owner.

(*b*) Or by the requiring of a bond either of a surety company or secured by a mortgage on contractor's plant insuring that the moneys shall be so applied.

(*c*) Sometimes by both the trustee account and the bond.

(3) In one recent contract (99) in addition to permitting the contractor to use part of the first payment on plant construction, the owner advanced $300,000 to be used by the contractor for the erection or extension of plant. The repayment of such moneys is secured by a mortgage on the plant and, in addition, the owner has the right to withhold the contractor's fees as they accrue until such sum is paid.

II. IN GUARANTEED-FEE TYPE OF COST-PLUS CONTRACT.

The cost of the construction of or extensions or additions to plant (authorized by the owner) is included in and spread over the cost of the vessels and is borne by the owner, and the plant so constructed or extensions so made belong to the owner. Usually the contractor has option to purchase the improvements at an agreed valuation. The establishment or the extension of plant is within the control of the owner.

The owner usually imposes a reasonable limit (outside of the contract) upon the amount that may be expended for plant or extension.

In one case (45) the owner made a loan to the contractor to cover permanent improvements, the repayment of the loan being secured by a mortgage on contractor's plant.

III. IN SLIDING-SCALE TYPE OF COST-PLUS CONTRACT.

Cost of the construction of plant or of extensions to plant (authorized by the owner) is included in and spread over the cost of the hulls and is borne by the owner. The plant so constructed or extensions so made, so far as paid for by the owner, belongs to it (except that some of the contracts provide for its belonging to the owner only where the average cost per hull exceeds the estimated cost plus the normal fee). Those paid for by the contractor belong to the contractor. The contractor usually has the option to purchase the construction paid for by the owner at an agreed valuation. In some cases all of the plant constructed is paid for by the owner; in others (for example, 14, 60, 73) the amount to be expended on plant is limited in the contract. Where no limit is named in the contract, the owner imposes a reasonable limit. Of course, the estimated cost per hull or vessel includes, in fact, an estimated cost of plant which is distributed over the vessels.

IV. IN AGENCY CONTRACTS.

A. *Land.*—The land is owned by the contractor, except in one case (contract 86), where it is owned by the city of Newark.

B. *The plant.*—(1) Except in contract 91, the plant must be constructed at the owner's expense. (*a*) Where so constructed, the plant belongs to the owner; (*b*) the owner has the option to purchase the land; (*c*) if the owner does not purchase the land, the contractor (in contract 86, the city of Newark) has the option to purchase the plant constructed at the expense of the owner; (*d*) if neither the owner purchases the land nor the contractor (or the city) the plant, the owner may remove the plant; (*e*) in each of these three cases the owner has imposed a limit upon the cost of plant.

(2) In contract 91 the agent owns the real estate and plant. The owner advances $500,000 to extend the plant and takes a mortgage on the plant as security for the repayment of the $500,000 and has the right to withhold the agent's fees until the sum of $500,000 has been repaid.

SUBCONTRACTS AND ORDERS.

I. IN LUMP-SUM CONTRACTS.

When the contractor is protected as to materials, it does not give orders in excess of the schedule prices without the owner's approval.

In the late contracts the contractor does not make commitments for engines, boilers, auxiliaries, deck machinery, etc., without the owner's approval.

II. IN GUARANTEED-FEE TYPE OF LUMP-SUM CONTRACTS.

The owner has complete control over all orders and commitments for materials, equipment, and supplies for vessels and plant. These orders are made by the contractor in the owner's name. The contractor is not liable on such obligations where owner's approval is obtained.

III. IN SLIDING-SCALE FEE TYPE OF COST-PLUS CONTRACT.

Same as in guaranteed-fee type.

IV. IN AGENCY CONTRACTS.

The owner has complete control of all subcontracts and commitments and of every detail of the work, and the agent is bound to serve and protect the owner's interests at all times.

Admiral BOWLES. I was about to explain one of the agency contracts. Is that satisfactory to you, Mr. Chairman?

The CHAIRMAN. Yes; certainly.

Admiral BOWLES. This contract [indicating] is with the American-International Co.

Senator NELSON. Where is that located?

Admiral BOWLES. The American-International Co. have their offices in New York; their shipyard is located at Hog Island, about 8 or 9 miles below Philadelphia on the Delaware River. They have undertaken to build 50 cargo vessels of 7,500 tons each and 70 15-knot troop and cargo vessels of 8,000 tons dead weight each.

The CHAIRMAN. Admiral Bowles, do you know how many ways they have completed?

Admiral BOWLES. I do not, Mr. Chairman, but I will show you in a few moments a photograph showing the condition of their place at the present time.

The CHAIRMAN. How many ways are contemplated there?

Admiral BOWLES. They are to build 50 complete ways. They undertake to build 25 of these 50 7,500-ton cargo vessels within 15½ months and 25 within 18½ months; that is, from the date of the contract—September 13.

Now, of the troop vessels they have to deliver 25 within 15 months, 25 within 20 months, and 20 within 22 months.

The Fleet Corporation advances to them the money for the construction of the shipyard, estimated to cost $21,000,000.

Senator NELSON. The entire cost?

Admiral BOWLES. The entire cost. The vessels that are contracted for were simply estimated as to cost in the beginning, and it was estimated that the cargo vessels would cost $1,100,000 each, or $154 per dead-weight ton, and the troop vessels $1,650,000 each, or $206 per ton.

The contracting company is paid a fee of $55,000 per cargo vessel, which is 5 per cent of the estimated cost, and $82,500 for the troop vessels, which is also 5 per cent of the cost.

If the actual cost is less than the estimated cost, the agent or the contractor gets one-third of the savings, the owner and the employees each get one-third. Now, there are premiums——

Senator NELSON (interposing). Well, the contractor, you say, gets a certain percentage, and the owner and the employer——

The CHAIRMAN (interposing). That is the Emergency Fleet Corporation.

Admiral BOWLES. The Emergency Fleet Corporation takes one-third, and the men in the shipyard get one-third.

Senator NELSON. The laboring men?

Admiral BOWLES. The laboring men.

Senator NELSON. And the contractor gets one-third?

Admiral BOWLES. Yes.

Senator HARDING. Let me interject the remark at this point that I think that is the fairest policy that I have heard reported.

Senator NELSON. Yes; that is a good contract.

Admiral BOWLES. That is Admiral Capps's work.

Senator HARDING. I am no respecter of admirals, but I think it is a fine policy.

Admiral BOWLES. There are premiums for the early delivery of these vessels, which can not exceed, however, $14,000 apiece for each cargo vessel, and $17,500 per troop vessel.

Senator JONES. To whom does that premium go?

Admiral BOWLES. That premium goes to the agent.

Senator NELSON. The contractor?

Admiral BOWLES. The contractor.

Senator JONES. The employees, the workmen, get none of that?

Admiral BOWLES. It will be arranged by the agent to distribute a very large portion of that to selected employees—whoever they choose.

Senator JONES. Is that provision in the contract?

Admiral BOWLES. I forget at this moment whether it is in the contract or not, but I know it is the understanding and will undoubtedly be carried out.

If the actual cost exceeds the estimated cost, and these losses are caused by any neglect of the agent's executives or managers, then there are various provisions for damages, which, however, do not exceed $14,000 per cargo vessel, nor $17,500 for a troop vessel; that is, these reductions shall not reduce the agent's fee below $41,000 per cargo vessel, nor below $65,000 per troop vessel.

Senator JONES. That is in the nature of liquidated damages?

Admiral BOWLES. That is the measure of damages.

The CHAIRMAN. No matter what the delay?

Admiral BOWLES. No matter what the delay, because he has a minimum fee under any circumstances; except in this case, that where the owner becomes dissatisfied with the agent's performance of his duty the owner may forfeit the contract and take it over from the agent.

The Fleet Corporation owns the improvements and has an option to purchase the real estate at the cost price.

Senator NELSON. That is, where one of these shipbuilding plants is erected the land is not owned by the Government?

Admiral BOWLES. No.

Senator NELSON. Whom is it owned by?

Admiral BOWLES. It is owned by the American-International Co.

Senator NELSON. And when the work is completed the Government has the option of purchasing the land?

Admiral BOWLES. It has the first option.

Senator NELSON. But suppose the Government does not see fit to buy the land, what about the plant then? The Government owns the plant; is there any provision for the company taking it over?

Admiral BOWLES. The owner has the option to purchase, and if the owner does not purchase, the agent has the option to purchase the buildings, at an appraised value, and if neither the agent nor the owner exercises the option, then the owner may remove the property.

Senator CALDER. The owner may do what?

Admiral BOWLES. Remove the property. That is, the Fleet Corporation may remove the machinery, the improvements that are removable.

The CHAIRMAN. Is the cost of the land fixed in case the Government wants to exercise its option to purchase it?

Admiral BOWLES. The cost of the land is fixed at $7,600,000, and any further sum which the agent may be obligated to pay out to the Commonwealth of Pennsylvania; there are some assessments and taxes on the land due to the Commonwealth of Pennsylvania.

The CHAIRMAN. How much land is there?

Admiral BOWLES. I do not remember, Mr. Chairman.

Senator JONES. Well, practically that will force the Government to buy the land, will it not?

Admiral BOWLES. It will depend entirely upon what the shipbuilding situation is at the close of the war. If the Congress and the Government so regulate their affairs that it becomes profitable to operate a merchant marine of the United States, the Government may have made a splendid investment in these shipyards.

Senator NELSON. This contract goes into the record, does it?

Admiral BOWLES. That is a part of the contract submitted, and the analysis I have given of this agency contract is substantially the same as the others, with the necessary changes in the figures.

Senator CALDER. Who is the president of this corporation that you have described?

Admiral BOWLES. Mr. Charles A. Stone, of Boston.

Senator CALDER. Of Stone & Webster?

Admiral BOWLES. Yes, sir.

The CHAIRMAN. Were they building ships before the war; do you know?

Admiral BOWLES. They owned a controlling interest in the New York Shipbuilding Co., and only in that way do they build ships.

The CHAIRMAN. Is the New York Shipbuilding Co. an old-established shipbuilding enterprise?

Admiral BOWLES. Yes, sir; it was established in 1901 or thereabouts—1900, I think.

Senator NELSON. Where were they?

Admiral BOWLES. At Camden, N. J.

Senator JOHNSON. Well, prior to the war did they have the particular land that is described in the contract?

Admiral BOWLES. That I do not know, but I think not.

Senator JOHNSON. Was that acquired by them for the purposes of the contract?

Admiral BOWLES. For this purpose.

Senator JOHNSON. For this purpose. How many contracts, or, rather, how many ships are contracted for with this particular corporation?

Admiral BOWLES. There are 120.

Senator JOHNSON. One hundred and twenty; is it the largest contract that you have?

Admiral BOWLES. It is the largest contract.

Senator JOHNSON. The aggregate sum I did not get.

Admiral BOWLES. It is about $165,000,000.

Senator JOHNSON. I see. The amount under the contract that would be realized by the contractor was about what?

Admiral BOWLES. I will have to figure that up; it is about $6,000,000.

Senator JOHNSON. I am speaking just approximately, of course. Now, permit me to recapitulate for just a moment, and correct me if I am in error, will you not? The contract is entered into by our Government—that is, by the representatives of the Government, the Shipping Establishment—with the particular corporation; the corporation is supplied the requisite funds for placing the particular

ground in readiness for the consummation of the contracts and their execution; the liabilities are undertaken by the Government in respect to the construction of what may be essential, the appropriate machinery, and the like; is that correct?

Admiral BOWLES. Yes.

Senator JOHNSON. The contracting party does what? Oversees the work?

Admiral BOWLES. Supplies the "know how."

Senator JOHNSON. Supplies the "know how." I think that is a good answer. That is all it does?

Admiral BOWLES. It supplied in this case the land, and that is all.

Senator NELSON. And the contractors supplied what?

Admiral BOWLES. Well, they supplied the complete organization for carrying on the work; that is what I mean by the "know how."

Senator JOHNSON. Yes. Well, they supplied the organization. But the capital, so far as that is concerned, and everything requisite for the organization is supplied by the Government?

Admiral BOWLES. Yes.

The CHAIRMAN. Do those companies have to have the command of a certain amount of capital—for instance, to pay the men in advance of the Government pay rolls, and that sort of thing?

Admiral BOWLES. We pay every bill and pay roll as it becomes due.

The CHAIRMAN. For instance, take the men on the work; they do not wait until you audit the bills and check up the accounts before getting their money, do they?

Admiral BOWLES. I think they have been obliged to have a small amount of capital; that is, small compared with our total expenditures; but the practice is for us to pay the pay rolls when they are due, for both staff and employees.

Senator JOHNSON. I see. Now, in furnishing all of the money for the pay rolls, the staff and the employees, and the like, does the Government pay as well salaries for the "know how" to which you refer?

Admiral BOWLES. We pay the staff of the actual shipyard. The contractors are paying some additional staff themselves, but the bulk of it we pay.

Senator JOHNSON. When you speak of the staff of the shipyard, do you mean the officers of the corporation?

Admiral BOWLES. I mean not only what you would call officers of the corporation but all superintendents, foremen, designers, and the like.

Senator JOHNSON. Then am I correct in saying that you pay not only the officers of the corporation but the designers, superintendents, and the like?

Admiral BOWLES. That is correct.

Senator JOHNSON. Who is the president of the corporation? Is it Mr. Stone?

Admiral BOWLES. The president of the corporation that is doing the actual work is Mr. Dwight P. Robinson. They have formed a subsidiary corporation for the purpose of this contract, called the "American International Shipbuilding Corporation."

Senator JOHNSON. And Mr. Robinson is president. Does he receive a salary?

Admiral BOWLES. I think not.

Senator JOHNSON. Are you clear on it or is that matter doubtful?

Admiral BOWLES. Well, I can only say—I have not looked at the salary list, but he told me he was drawing no salary.

Senator JOHNSON. I see. When you say "we pay the officers of the corporation," you mean what officers?

Admiral BOWLES. We pay every active officer engaged upon the work.

Senator JOHNSON. Your rolls would show exactly what their positions were and what salaries they received and the like, would they not?

Admiral BOWLES. Yes; exactly.

Senator JONES. Do you want Admiral Bowles to furnish that information?

Senator JOHNSON. Yes; I think it would be wise.

Senator NELSON. As I understand it, Admiral Bowles——

Senator JONES (interposing). Just a moment, Senator Nelson; I wanted to ask the admiral to furnish a list of officers of the company, with their salaries; we would like to know the salaries.

Admiral BOWLES. All right, sir.

(The statement was subsequently furnished by Admiral Bowles and is here printed in full, as follows:)

AMERICAN INTERNATIONAL SHIPBUILDING CORPORATION.

Summary of overhead employees receiving $200 per month and over.

Work order No.	Department.	Number of employees.	Total.
100	Engineering	30	$11,154.84
102	General manager's	18	11,349.98
103	Office manager's	4	975.00
104	Works manager's	87	29,919.15
105	Accounting	20	5,583.32
106	Employment	21	7,625.00
107	Purchasing	22	6,658.33
110	Commissary	2	616.66
210	Fabricating	63	22,767.80
Total		267	96,649.28

ENGINEERING DEPARTMENT (W. O. No. 100).

Name.	Position.	Rate per month.	History.
Bluhm, H. W	Designing engineer	$250.00	4 years with Isthmian Canal Commission as general designer on concrete, handling, plans, trestles, buildings, miscellaneous structural steel construction, reinforced concrete wharves, etc.
Bowerman, E. R	Assistant structural engineer	250.00	Contract engineer with H. S. Kerbaugh (Inc.), on New York State Barge Canal construction; chief engineer for Leary Construction Co.
Boyajohn, H. M	Structural engineer	400.00	Formerly in private practice in Portland, Oreg., having broad experience in design of large motor-car plants, docks, warehouses and grain elevators.
Converse, W. F	Assistant mechanical engineer	350.00	Engineer of works of Westinghouse Lamp Co.; wide experience as operating engineer for various electric-power companies.
Dale, O. G	Assistant chief engineer	666.67	Formerly part owner of Mead-Morrison Manufacturing Co.

Summary of overhead employees receiving $200 per month and over—Continued.

ENGINEERING DEPARTMENT (W. O. No. 100)—Continued.

Name.	Position.	Rate of month.	History.
Davenport, R.....	Assistant mechanical engineer.	$333.34	Formerly designing engineer with American Car & Foundry Co., also with Arnold Co. on industrial plant design.
Emerson, G. D.....	Assistant civil engineer.....	350.00	14 years with Boston Transit Commission.
Fuller Wm. A.....	Sanitary engineer.....	500.00	With Fuller-Coult Co., consulting engineers, St. Louis, for 9 years as consulting and supervising engineer; formerly with United States Government at Rock Island for 5 years.
Grunwell P. C.....	Designing engineer.....	234.00	Formerly junior engineer on river and harbor improvements; draftsman on navy-yard surveys.
Haggard H H.....	Assistant utility engineer...	250.00	8 years in the employ of the Cuban Engineering and Contracting Co. on construction of sewers and water work in Habana.
Hayne, Dan C.....	Assistant sanitary engineer..	300.00	Formerly construction engineer and superintendent of concrete construction for Cleary-Curt Co., general contractors at Minneapolis; 3 years as principal assistant to city engineer, city of Indianapolis.
Hirsch, J. G.....	Chief draftsman.....	275.00	Formerly with Daniel W. Meade, engineer in charge mechanical department; with Bates & Rogers Construction Co. as contractor's engineer; recently assistant chief draftsman with Stone & Webster.
Horton, I C.....	Civil engineer.....	300.00	19 years railroad experience; 13 years in Boston office of Stone & Webster.
Ilg, George M.....	Assistant structural engineer	225.00	16 years experience in the steel construction and general building work.
Mackendrick F. R..	Estimator.....	300.00	5 years with Stone & Webster as assistant chief draftsman and estimator.
Manning, J. H.....	Chief engineer.....	750.00	With Stone & Webster for 7 years; superintendent White Salmon; hydraulic engineer in charge hydraulic reports and appraisals on Hauserlake and Verdi developments, in Boston office.
Maxfield, D. E.....	Assistant mechanical engineer.	333.33	Formerly with R. D. Wood & Co. as plant engineer; many years on power plant design and construction.
Meigs, John.....	Dredging engineer.....	1,000.00	Direct charge of preparation of comprehensive plans for the entire rehabilitation of port of Philadelphia. Previously director of wharves, docks, and ferries, city of Philadelphia.
Murphy, Leo O.....	Assistant civil engineer.....	225.00	2 years with United States Geological Survey as civil engineer; 7 years as assistant engineer with Stone & Webster on water power development and as hydraulic engineer at Reno.
Osgood, H. W.....	Electrical engineer.....	350.00	11 years with Stone & Webster as electrical engineer.
Pope, Joseph.....	Mechanical engineer.....	325.00	Operating and betterment engineer with Stone & Webster for 8 years.
Porter, Capt. L. H..	Superintending captain (at present in fabricating department).	500.00	8 years with the Atlas Steamship Co. as ship's officer and master; 2 years with the United Fruit Co. as chief officer, and 11 years as ship officer and 3 years as superintendent of construction.
Reeve, L. N.....	Assistant structural engineer.	275.00	Many years' experience on hydroelectric construction in the West.
Sanders, John, jr...	Assistant to chief engineer..	312.50	Formerly with New York Shipbuilding Co. and Cramp Ship and Engineering Co.; broad experience on street and railway construction.
Skinner, Ramsey...	Assistant sanitary engineer..	600.00	Formerly with Ulen Contracting Co.; 25 years' experience on installation of pumping machinery, power plants, and irrigation systems.
Smith, B. L.....	Utility engineer.....	300.00	3 years as principal assistant to Ezra B. Whitman, consulting engineer, Norton, Bird & Whitman.
Stirrat, Capt. Wm..	Assistant to superintending captain.	300.00	20 years as second mate and purser on Allen Line, White Star Line, United Fruit and Bell Bros. steamvessels; 6 years with Panama Railroad Co. as chief clerk in docks freight department.

Summary of overhead employees receiving $200 per month and over—Continued.

ENGINEERING DEPARTMENT (W. O. No. 100)—Continued.

Name.	Position.	Rate per month.	History
Strachan, John	Marine engineer (adviser on purchase of marine equipment; will be superintending engineer during installation of machinery and running of trial trips).	$500.00	Long experience as chief engineer of trans-Atlantic ships and United Fruit Co.; recently with Babcock & Wilcox.
Tandy, Walter L.	Railroad engineer	200.00	Assistant engineer of Pennsylvania lines west for 3 years; 3 years with Boston & Maine R. R. as assistant engineer in valuation department.
Wisner, R. R.	Assistant electrical engineer.	200.00	4 years with Stone & Webster as electrical draftsman and squad chief.
Total		11,154.84	

GENERAL MANAGER'S OFFICE (W. O. No. 102).

Bunce, H. L.	Secretary to general manager.	$300.00	With Stone & Webster 9 years, with various operating companies; recently secretary of engineering department.
Canada, W. J.	Engineering assistant to general manager (assistant to Snyder regarding contracts, etc.).	375.00	6 years with the Rocky Mountain Fire Underwriters' Association as hydraulic and electrical engineer; 4 years with the Bureau of Standards, Washington, as assistant physicist and electrical engineer.
Clark, C. M.	Assistant to general manager and assistant secretary to corporation (legal contract end).	541.67	8 years with Stone & Webster as secretary of various public service corporations; recently in New York office.
Goodenough, W.	General manager	2,083.33	Formerly chief engineer with Stone & Webster.
Eustis, L. E.	Assistant to general manager, executive assistant.	550.00	With Stone & Webster for 17 years on many important jobs, such as White River and Keokuk developments; assistant treasurer of Stone & Webster operating companies in Boston office.
Kemp, Wm., 2d	Progress assistant (assistant to Veltfort).	200.00	4½ years with Barge Canal Terminals, New York City, as assistant to engineer in charge of construction, Pier 6, East River, New York City, and preparing plans for specifications for harbor development.
Lovekin, L. D.	Consulting engineer	1,125.00	Chief engineer of New York Shipbuilding Corporation, where he has been for 17 years.
Oviatt, H. C.	Transportation manager	1,250.00	Formerly with New York, New Haven & Hartford R. R., general superintendent of western division immediately before coming on this work.
Ross, W. G.	Engineering assistant (assistant to Snyder regarding contracts, etc.).	416.66	Graduate engineer, 15 years' experience; last 11 years with Stone & Webster in various capacities; general superintendent of Cape Breton Electric Co.; superintendent of construction, Edison Electric Illuminating Co. of Brockton; sales manager, Abington, Mississippi River Power Co., Dallas Electric Corporation, etc.
Schobinger, George.	Assistant progress engineer (assistant to Veltfort).	200.00	6 years with the United States Reclamation Service as assistant engineer.
Sherman, Chas. G.	Assistant in general manager's department (assistant to Snyder regarding contracts, etc.).	333.33	Consulting engineer for the past 15 years.
Snyder, A. L.	In charge of interrelations with Shipping Board.	625.00	With Stone & Webster for 13 years in various capacities, as superintendent of power, Seattle Electric Co.; electrical engineer on Keokuk plant and transmission lines and Big Creek transmission line; recently electrical engineer in Boston office engaged on reports and appraisals.
Van Bibber, A. E.	Assistant to general manager in charge of organization matters.	750.00	2 years with Industrial Co., Boston, as executive.
Veltfort, T. E.	Progress engineer	300.00	Progress engineer on Keokuk development, new technology buildings, and San Antonio cantonment.

Summary of overhead employees receiving $200 per month and over—Continued.

GENERAL MANAGER'S OFFICE (W. O. No. 102)—Continued.

Name.	Position.	Rate per month.	History.
Woods, Walter H...	Assistant to Van Bibber....	$300.00	7 years as president and treasurer of the Walter E. Woods Co.
Hunt, R. L.....	Publicity assistant.....	666.66	6 years as secretary to George Wharton Pepper; three years as secretary to United States Fidelity & Guaranty Co.: 3 years as vice president and manager of the Morris Plan Co.
Pierce, D. T.....	Publicity manager.....	833.33	4 years as executive assistant to Barber Asphalt Paving Co.
Reed, Thomas B...	Publicity assistant.....	500.00	17 years with Philadelphia News Bureau, Philadelphia North American, Telautograph Corporation, New York, and as advertising and business managers, etc.
Total.....	.....	11,349.98	

OFFICE MANAGEMENT (W. O. No. 103).

Blake, N. H.....	Assistant office manager.....	$200.00	4 years with the Bell Telephone Co. of Pennsylvania as assistant to district manager.
Endicott, T. H.....	Office manager.....	375.00	7 years with Stone & Webster as purchasing agent.
Oldaker, W. I.....	Assistant to office manager (in charge of telephone service).	200.00	14 years with the New York Telephone Co. as telephone supervisor and special agent.
Porter, H. E.....	Assistant office manager.....	200.00	10 years with the S. S. White Dental Manufacturing Co., as manager of the subscription department of the Dental Cosmos.
Total.....	.....	975.00	

WORKS MANAGEMENT (W. O. No. 104).

Abrahamson, L. R.	Progress engineer (assistant to Veltfort).	$225.00	4 years supervising engineer on construction work for S. L. Brumbaugh, Philadelphia, and Mockett Construction Co., Camden.
Andrew, J. D.....	Assistant works manager....	1,000.00	Formerly in charge of all construction for Edison Electric Illuminating Co. of Boston.
Anthony, H. F.....	Chief job engineer.....	416.67	General superintendent in charge of dam construction; 3 years as resident engineer at Keokuk. Formerly with H. L. Cooper for many years.
Baldwin, C. W.....	Assistant storekeeper (in charge of checking cars.)	225.00	Assistant to general manager of the Mid-West Refining Co.; stenographer and clerk for the Philadelphia & Reading and the Texas Co. for 12 years.
Barden, James R...	Progress engineer (assistant to Veltfort).	250.00	5 years general superintendent of construction, president and treasurer of Barden Bros., contractors, Yonkers, N. Y.
Barter, H. H.....	Utility superintendent (sewers, water, light, and roads.)	500.00	With Stone & Webster for several years; assistant to superintendent of construction at White River and White Salmon hydraulic plants: recently chief engineer, Union Film and Triangle Film Corporations.
Bayne, C. W.....	Assistant superintendent trucks and automobiles.	250.00	Formerly with Ackerson Motor Truck Co.: 3 years with Ford Motor Co., Detroit, Mich.: previously chief cost accountant of Timkin-Detroit Axle, Co.
Bird, E. M.....	Traffic manager.....	300.00	
Black, Edgar N....	Assistant storekeeper.....	225.00	
Blake, Paul.....	General superintendent of ways and wet basins.	625.00	Formerly contractor. Has had considerable experience in the erection of wharves, docks, and ferry; also on quarry work.
Brayton, L. F.....	General superintendent of material.	833.33	15 years' experience on structural engineering, including 2 years in charge of Portland, Oreg., office of Stone & Webster. Seven years in private practice.

Summary of overhead employees receiving $200 per month and over—Continued.

WORKS MANAGEMENT (W. O. No. 104)—Continued.

Name.	Position.	Rate per month.	History.
Brookfield, Capt. E. W.	Adjutant of guards	$300.00	3 years with Canadian expeditionary force as infantry and staff officer.
Carr, T. A	Works manager	833.33	7 years with Stone & Webster: general superintendent of large jobs, such as Minneapolis Power Station, one of the fastest built stations in the country, power house at Keokuk, new building for M. I. T. and recently finished First National Army Cantonment at probably the lowest cost of any out of 16.
Catherman, H. Y	General car foreman	200.00	15 years with Philadelphia & Reading Railway as general foreman of car inspection.
Clark, J. H	Superintendent of miscellaneous construction (grading and buildings).	416.66	7 years as field superintendent with Stone & Webster.
Coggshall, F. H	Superintendent of materials (assistant to Lynch).	200.00	3 years as general storekeeper National Steel Co., Hamilton, Ontario.
Comer, R. O	Assistant storekeeper	275.00	
Considine, J. B	Superintendent passenger service.	250.00	34 years trainmaster, train dispatcher, and chief train dispatcher New York, New Haven & Hartford R. R. Co.
Cotterill, J. R	Captain of guard	250.00	2 years as officer with Canadian expeditionary force.
Crouse, W. T	Chief clerk of stores department.	225.00	16 years with the United Gas Improvement Co. as assistant superintendent of stores.
Davidson, Ole	Superintendent of railroad construction (assistant to Locke).	300.00	20 years on railroad construction, including 7 years with Stone & Webster as assistant superintendent and field engineer.
Dick, D. D	Special assistant to works manager.	300.00	8 years with Stone & Webster as resident engineer and superintendent of construction on various pieces of work.
Diver, Edward W	Assistant fire chief	209.17	26 years as captain of fire bureau, city of Philadelphia.
Donaldson, F	Construction manager	750.00	2 years chief engineer for T. A. Gillespie Co.; 3 years managing engineer on subway work; general superintendent on building Camp Zachary Taylor.
Dransfield, Thomas.	Estimater (assistant to Veitfort).	210.00	Formerly with the El Paso Bridge & Iron Co., El Paso Tex., as structural and construction engineer.
Eggiestone, F. B	Chief clerk	200.00	4 years with J. C. Newman Cigar Co. and Firestone Rubber Co., Akron, Ohio, as chief clerk in the engineering department.
Evans, J. B	Assistant superintendent on piling.	300.00	Formerly with J. C. Stewart; 6 years in private business.
Farley, M. M	Assistant to construction manager (assistant to Donaldson).	300.00	Assistant engineer, board of water supply, New York, and assistant quartermaster, Camp Upton.
Field, F. T	Superintendent marine service.	300.00	Formerly superintendent of Long Island Sound ferry; marine engineer Interstate Lighterage Co.; general foreman Staten Island Shipbuilding Co.
Flemming, F. G	Superintendent of records and statements (assistant to Brayton).	400.00	Secretary and treasurer Merchants' Construction Co.; auditor with Hollis, Tilton & Porte, public accountants, for 5 years.
Fortune, Wm. B	Superintendent of ship assembling.	1,000.00	9 years with New York Shipbuilding Co., in charge of erection of work and launching of ships. Recently with the St. Lawrence Bridge Co., having just completed large span bridge across the St. Lawrence River at Quebec.
Fowler, George E	Warehouse foreman	200.00	8 years as salesman with Proctor, Gamble & Co.
Gallaher, F. F	Shops manager	833.34	10 years with the New York Shipbuilding Co.; in charge of their shops.
Greenhood, B. J	Progress engineer (leaving Jan. 1).	200.00	In charge of design of Coney Island terminals; masonry designer for Stone & Webster; 11 years with the Trusser Concrete Steel Co. as chief engineer.
Groesbeck, G. R	Progress photographer	225.00	In charge of photographs with Stone & Webster for past 4 years; previously assistant advertising manager for Faunce & Spinney.

Summary of overhead employees receiving $200 per month and over—Continued.

WORKS MANAGEMENT (W. O. No. 104)—Continued.

Name.	Position.	Rate per month.	History.
Harris, B. W	Assistant to works' manager	$1,000.00	Member of firm of Manufacturers Supply Co. of Minneapolis.
Harris, Leo B	Charge of construction equipment.	625.00	Do.
Hartenstein, Fred	Superintendent of transportation.	400.00	Formerly trainmaster, superintendent of transportation, division superintendent of Long Island R. R.; superintendent of P. & M. R. R.; assistant general manager Lehigh Valley R. R.; labor agent New York, New Haven & Hartford R. R.
Henry R. S	Assistant engineer	200.00	Two years as building superintendent with Newport Construction & Engineering Co.
Ingham, W. B	Stores department	250.00	Formerly engineering and construction departments Pennsylvania R. R.; civil engineer and superintendent of construction, New York Board of Water Supply; Quartermaster's Department at New London; assistant to chief engineer of public utilities commission of New Jersey.
Jones, W. T	Captain of police	200.00	Sergeant in Spanish-American War. Recently stationed at Fort McKenzie as quartermaster; also at Fort Leavenworth as prison guard.
Jordan, E. E	Yardmaster	200.00	9 years as yardmaster and trainmaster Lehigh Valley R. R.
Kiefer, A. W	Progress engineer	250.00	Formerly with Johns-Manville and Westinghouse Companies as superintendent of construction and manager of construction department.
King, E. C	Checking wage rates	225.00	7 years with Southern Pacific, Los Angeles, as assistant engineer.
Kirby, W. S	Assistant storekeeper	250.00	
Larry, W. L	Transportation superintendent.	400.00	18 years with New York, New Haven & Hartford R. R.; one year with the Fitchburg R. R. Co.; 10 years with Massachusetts Public Service Commission; freight brakeman, locomotive fireman, engineer, road foreman of engines, and master mechanic.
Lawry, Melvin	Marine superintendent	250.00	Formerly master of United States tug; in the United States Lighthouse Service; and master of steamship Yacht.
Lever, G. S	Special fire and police protection (inside man).	250.00	Formerly superintendent for E. D. Lever, contractor and builder; chief of police of Abington and Ogontz, Pa.; recently finger print expert.
Littlejohn, R. G	Office engineer	200.00	
Locke, W. L	Special assistant works manager.	833.33	18 years with Stone & Webster as construction superintendent.
Ludwick, E. E	Assistant progress engineer	250.00	4 years as superintendent of construction with Rankin, Kellog & Crane.
Ludwick, F. J	do	225.00	Do.
Lynch, J. E	Assistant superintendent of stores (assistant to Brayton).	400.00	Formerly with Stone & Webster in purchasing and stores department; recently manager for Page & Hill Co., Minneapolis.
Macbeth, H. A	Material supervisor	225.00	5 years on traffic and shipbuilding with Bayonne Bolt & Nut Co.
Martin, J. T	Manufacturing manager ship construction.	1,250.00	Last 15 years general superintendent marine department Maryland Steel Co.
Merrill, C. H. S	Office manager at Hog Island.	200.00	Formerly secretary to chief engineer Stone & Webster.
Minot, S. W	Assistant fire chief	200.00	
Meskill, J. J	Fire chief	333.33	Chief thirty-first battalion bureau of fire, city of Philadelphia.
Mesny, R. B	Assistant superintendent of labor, Hog Island.	300.00	5 years general construction with Stone & Webster.
McDill, R. D	Assistant storekeeper	300.00	Formerly commissary storekeeper at Gorgona, Panama Canal Zone; general storekeeper with Cleveland Construction Co., and Texas Light & Power Co., Waco and Dallas.
McDonald, Alex	Assistant superintendent pump plants.	250.00	14 years as superintendent with C. A. Simms & Co.
McLane, W. L	Assistant engineer to Anthony.	200.00	3 years construction engineer with Firestone Tire & Rubber Co.

Summary of overhead employees receiving $200 per month and over—Continued.

WORKS MANAGEMENT (W. O. No. 1041)—Continued.

Name	Position.	Rate per month.	History.
O'Neill, A. J.	Material clerk	$200.00	
Page, F. H.	Assistant storekeeper	250.00	8 years salesman with M. L. Kleine, Portland, Oreg.; 7 years with Crane & Ordway Co., St. Paul, Minn.
Parkinson, R. L.	Assistant storekeeper	250.00	6 years with Brayton Engineering Co., Portland, Oreg., and Porter Bros., Detroit, Mich.
Patterson, G. G.	Master mechanic	333.33	Formerly road foreman of engines, New Central Railroad, and engine-house foreman with the Ulster & Delaware Railroad Co.
Pearsall, W. R.	Assistant in office to Merrill.	200.00	10 years drafting experience, 12 years superintendent with C. P. H. Gilbert, W. W. Bosworth, and Stone & Webster on technology construction and Rock Island Arsenal.
Pearson, R. L.	Superintendent railroad yard.	333.33	Formerly track supervisor and division engineer New York, New Haven & Hartford R. R.
Pierce, E. H.	Engineer building department.	225.00	Engineer for 10 years with Firestone Tire & Rubber Co., Woodlawn Cemetery, and city of New York.
Rainear, C. W.	Chief requisition clerk	225.00	15 years with C. J. Rainer Co., Equipment Manufacturing & Supplies Co.
Redfield, J. E.	Assistant superintendent pump plants.	250.00	Foreman and superintendent 29 years with W. G. Slater, Godwin Construction Co., Jno. O. Merritt, and New York Sewage Co.
Reese, D. W.	General foreman	200.00	Resigned Dec. 25, 1917.
Robinson, H.	Field engineer	225.00	9 years with the Atlantic Construction Co., Atlantic City, N. J., as superintendent and engineer.
Rousch, W. W.	Assistant to Davidson	225.00	4 years with Stone & Webster on reinforced concrete and building construction and design, and 4 years with Fisher, Walsh & Raush Corporation as general manager.
Rust, J. W.	Engineer	225.00	Construction engineer with Hunkin-Conkey Construction Co., Cleveland, Ohio.
Salisbury, Ed. V.	Superintendent trucks and automobiles.	416.67	Formerly in charge of designs, organization, and equipment with the American field service in France; employed by the Rock Island Arsenal as automobile expert.
Schede, A. W.	Material engineer (assistant to Brayton).	333.33	Worked for Brayton Engineering Co.
Sinclair, Maj. A.	Superintendent of guards	450.00	Provost Marshal, City of Toronto, Ontario; Dominion Government, Canada.
Slack, Frank E.	Yard master	200.00	
Thornburg, T. R.	Labor manager at works	416.66	7 years superintendent of construction Stone & Webster.
Toland, H. I.	Material engineer (assistant to Brayton).	200.00	6 years with Merchants Shipbuilding Co.; New York Navy Yard; Cramp & Co., as production engineer.
Towne, E. S.	Assistant field engineer to Anthony.	200.00	
Tuell, S. B.	General utility superintendent (assistant to Barter, operation and maintenance).	416.67	Stone & Webster 16 years; recently Blackstone Valley Gas & Electric Co., Pawtucket, R. I.
Wagner, G. M.	Assistant storekeeper	250.0	General storekeeper 12 years with New York Shipbuilding Co. and 4 years with Joseph Campbell Co.
Webb, B. W.	Assistant storekeeper	200.00	4 years Delaware & Hudson Co., general auditor's office, assistant traveling auditor for 4 years.
Weston, W. B.	Field engineer (assistant to Anthony).	250.00	Consulting engineer, specializing in drainage and sanitation.
Wheeler, L. W.	Assistant storekeeper	250.00	
Total		29,919.15	

Summary of overhead employees receiving $200 per month and over—Continued.

ACCOUNTING DEPARTMENT (W. O. No. 105).

Name.	Position.	Rate per month.	History.
Arthur, Harry A...	Second assistant treasurer...	$500.00	11 years with Stone & Webster; assistant treasurer Savannah, Ponce & Paducah, and 1 year with American International Corporation as assistant secretary and treasurer, Siems-Carey Ry. & Canal Co., and auditor for American International Corporation in China and Japan.
Bringham, W.A....	Paymaster, Hog Island.....	208.33	Timekeeper, accountant, and paymaster on several Stone & Webster jobs in the West during the past 8 years; cost accountant with the Pacific Gas & Electric Co.; recently head timekeeper, cashier, and manager, commissary department, Phoenix Construction Co., Idaho.
Burnett, George P..	Chief pay roll clerk.....	200.00	7 years as district manager with Truckford Motor Co., San Antonio.
Dow, W. W.....	Assistant treasurer.....	833.33	15 years with Stone & Webster; assistant treasurer of operating companies, Stone & Webster Management Association and Stone & Webster Engineering Corporation.
Essley, H. E.....	Chief clerk.....	300.00	Many years on Government accounting; assistant treasurer and assistant manager of the Idaho Irrigation Co.
Fisk, C. R.....	Assistant chief timekeeper...	225.00	9 years with Stone & Webster as assistant construction accountant.
Isett, J. Warren....	Assistant to insurance manager.	200.00	Formerly with the General Accident Co. and National Life Co., engaged chiefly in the settlement of claims—11 years.
Kelly, J. A.....	Chief timekeeper.....	300.00	7 years with Stone & Webster as head timekeeper.
Kline, E. C.....	Assistant chief timekeeper..	225.00	3 years with Stone & Webster as timekeeper; 3 years with the Milwaukee Ry. & Light Co. as assistant foreman.
Lovejoy, W. C.....	Division timekeeper.....	250.00	8 years with New Orleans Credit Men's Association, superintendent of adjustment bureau.
McDaniel, D. L....	Assistant works accountant.	275.00	With Stone & Webster for 1 year as assistant to works accountant, San Antonio Aviation Field.
McElroy, J. C.....	Cashier at Hog Island.....	200.00	4 years with the Center Point Merchandise Co., Texas, as clerk and salesman; with Stone & Webster on cantonment work at San Antonio.
McMahan, J. A.....	Paymaster at Hog Island...	225.00	With Stone & Webster on cantonment work at San Antonio; 7 years with McArthur Bros.—general accounting.
Murray, A. T.....	Assistant cashier at Hog Island.	200.00	3 years with Stone & Webster as assistant accountant; 3 years with the Missouri River Power Co.
O'Brien, John E....	Insurance manager.....	250.00	7 years with Stone & Webster in connection with insurance at St. Croix Falls, Minnesota, Minneapolis, and Keokuk. Claim agent for Seattle and Tacoma public service companies.
Sealy, J. V.....	Chief paymaster at Hog Island.	300.00	6 years with Stone & Webster as assistant to works accountant; 6 years with Vielle, Blackwell & Buck as field accountant.
Thompson, C. H....	Assistant chief clerk.....	233.33	14 years as accountant, head timekeeper, and paymaster; 4 years with Stone & Webster as auditor, assistant secretary and secretary; 2½ years with Benham Irrigation Co., and allied companies.
Vaughn, E. M.....	Cashier.....	208.33	7 years with Stone & Webster as construction accountant.
Ward, H. H.....	Assistant works accountant.	250.00	8 years with Stone & Webster as assistant to works accountant; 4 years with McLean Construction Co.
Whitney, F. O.....	Cost accountant.....	200.00	Cost accountant with W. H. McElroy Co., Lock & Boimern & Co., R. P. Hazzard Co., Lamson & Co.
Total.....	.....	5,583.32	

Summary of overhead employees receiving $200 per month and over—Continued.

EMPLOYMENT DEPARTMENT (W. O. No. 106).

Name.	Position.	Rate per month.	History.
Adams, Arthur M..	Surgeon	$375.00	7 years with Midvale Steel Co. as assistant chief surgeon.
Aitken, R. W.	Manager Hog Island, employment office.	400.00	12 years with B. F. Goodrich Co. as assistant to general superintendent and operating manager of Chicago office.
Bay, C. R.	Real estate and assistant to Canterbury.	275.00	Formerly in charge of transmission and water rights at Keokuk.
Braid, Albert P.	Instructor on ships crafts	200.00	Formerly assistant superintendent of construction with Kurtz Bros., Bethlehem, Pa.; chief carpenter and foreman Atlantic Refining Co., and superintendent of construction, Floridin Co., Quincy, Fla., for 2 years.
Canterbury, R. C.	Superintendent of housing	500.00	Formerly engineer with South Shore Electric Co.; St. Croix Falls Car Development and Construction: identified with several of the larger Stone & Webster activities along engineering, commercial, and housing lines.
Davis, Phillip	Assistant to employment manager.	500.00	Identified with Civic Service House in Boston, associated with Meyer Bloomfield; director for 16 years of Employment Managers' Association; associated with work in Hull House, Chicago, and general civic betterment throughout the country.
Fultz, C. A.	Assistant to employment superintendent.	250.00	5 years with Walter S. Place, Boston; 4 years with Fox, Fultz & Co., druggists, as president and director; 1 year with Stone & Webster, El Paso, Tex.
Gibson, P. B.	Instructor of training school on ships' crafts.	250.00	Has been general manager of Southwestern Steamship Co. of Los Angeles; superintendent of works, Western Steel & Iron Works, Winnipeg.
Holmes, Wm. F.	Surgeon	350.00	In private practice of medicine.
Kennedy, D. R.	Employment manager	1,000.00	5 years with Youngstown Sheet & Tube Co. as assistant to president; 2 years with B. F. Goodrich Co., Akron, Ohio; director of industrial relations.
McConaghy, R. A..	Assistant superintendent of housing.	200.00	Temporary man.
Mifflin, S. W.	Welfare assistant	200.00	6 years private law practice; 2 years with Fayette R. Plumb (Inc.) and 2 years with Air Reduction, Co., New York.
Moreland, J. R.	Real estate engineer (temporary).	300.00	14 years as chief engineer, private practice; 5 years as construction engineer with Du Pont Powder Co., Gibbstown.
Morison, Rodney, jr.	Assistant to employment manager.	300.00	Identified with various well-known companies on river and harbor work in vicinity of Philadelphia.
Pratt, J. A.	Superintendent of ships' crafts training school.	500.00	Formerly director of Williamson Manual Training School, Philadelphia.
Reilly, John J.	Chief surgeon in general charge of health and sanitation.	625.00	Consulting surgeon and engineer of various industrial and mining companies in United States and abroad for the last 20 years; in association with Dr. William O'Neil Sherman of the Carnegie Steel Co.
Reddy, Geo. W.	Chief of sanitation	225.00	14 years as foreman, superintendent of construction work and engineer for Gillespie & Son, Oakview, Delaware County, Pa.
Roots, W. H. P.	Assistant to employment manager.	400.00	Particular experience in employment, welfare, and housing; recently in charge of mill, village farm, and general store for the New England Cotton Mill.
Schlaff, Herman	Surgeon	225.00	9 years general medical practice; connected with bureau of health and charities for 16 months; State sanitarium, 6 months; Midvale Steel Co., 18 months.
Slaughter, C. H. P..	Welfare assistant	200.00	22 years' private practice; physician for Norwegian consul in Philadelphia; surgeon for Ocean Accident & Guaranty Corporation; Travelers' Insurance Co.
Whittaker, R. W.	Real estate and assistant to Canterbury.	350.00	Formerly resident engineer, Vera Cruz R. R. Co.; general contracting in Vera Cruz and San Diego, Cal.; construction engineer for MacKenzie Saw Mills (Ltd.), Bombay, India.
Total		7,625.00	

Summary of overhead employees receiving $200 per month and over—Continued.

PURCHASING DEPARTMENT (W. O. No. 107).

Name.	Position.	Rate per month.	History.
Allen, C. R.	Chief clerk	$250.00	5 years with Stone & Webster, chief clerk in drafting department and secretary of engineering department: recently assistant manager of Underhill Press, Boston.
Barker, Chas. M.	Buyer	200.00	Formerly with Norton Co., Worcester, Mass., for 2 years in charge of western sales district; previous to that, with Standard Plunger Elevator Co. for 2 years in charge of estimating department.
Borschneck, C. F.	do	200.00	Formerly assistant manager Pittsburgh sales department of Standard Underground Cable Co.
Carrol, F. M.	Assistant chief expeditor	200.00	Formerly with Schutte & Koerting Co. for 1 year as production clerk. Previously with General Electric Co. for 5 years in same capacity.
Coffin, L. R.	Special assistant	500.00	11 years with Stone & Webster, the last 10 years as manager of their properties at Bellingham, Wash.
Darlington, G. P.	Chief expeditor	300.00	Formerly field inspector of Stone & Webster at Philadelphia. Previously sales manager of Bay State Insulated Wire & Cable Co., and superintendent of construction for Barnes & Loud Electric Co.
Dunn, E. L.	Chief requisition clerk	250.00	8 years with Stone & Webster, with various experience in time, material, traffic, and purchasing departments. Previous to that, with Brayton Engineering Co., Portland, Oreg., in same capacity.
Eggers, C. W.	Traffic manager	500.00	7 years general traffic manager Willys-Overland Co. Previously general freight agent, Westinghouse, Church, Kerr Co.
Forde, T. J.	Assistant manager of purchases.	400.00	With Stone & Webster 7 years in the purchasing department.
Fryer, Herbert	Buyer	333.33	In charge of the purchasing of heating equipment, cantonment division, War Department, Washington: for 4 years sales engineer and assistant manager. Boston office of Babcock & Wilcox Co,
Gent, L. W.	Chief clerk, traffic division	200.00	Formerly traffic manager, Logan Bros. Grain Co., Kansas City; Stephenson Hay Co., Kansas City; Arkansas Valley Int. Ry. Co., Wichita, Kans.
Hall, L. C.	Head buyer, miscellaneous	250.00	Formerly purchasing agent, Mississippi River Pr. Co., Keokuk; with Stone & Webster organization for past 5 years.
Hamilton, R. E.	Manager of purchases	1,000.00	15 years with Stone & Webster; general purchasing agent since 1910: recently in charge of purchasing and traffic, cantonment division, War Department, under Col. I. W. Littell.
Johnston, L. F.	Head buyer, electrical	225.00	Recently sales engineer and assistant to vice president, Philadelphia Electric & Manufacturing Co.
Linehardt, C., jr.	Buyer	200.00	Formerly manager of Washington, Norfolk and Richmond and offices of Pierce Butler & Pierce Manufacturing Co., plumbing contractors.
Lodge, D. W.	Assistant to purchasing manager.	250.00	11 years with United States Engineer's Office, Philadelphia, as purchasing agent and inspector of materials.
Newton, Geo. W.	Buyer	250.00	Formerly manager of Leatherlee Lumber Co.; salesman for American Wood Working Machinery Co. Recently in charge of purchase of lumber for cantonment in San Antonio.
Noonan, E. M.	Head buyer steel products	300.00	For the past 3 years in charge of New England sales department of the Lorain Steel Co.
Snyder, H. E.	Buyer	200.00	Formerly shop superintendent of V. Clad & Sons Co. and Hodges Water Still Co. Recently in cantonment division, War Department.
Stapleton, J. F.	Head commissary buyer (must be raised to $250).	200.00	10 years with New York, New Haven & Hartford R. R. in purchasing department.

Summary of overhead employees receiving $200 per month and over—Continued.

PURCHASING DEPARTMENT (W. O. No. 107)—Continued.

Name.	Position.	Rate per month.	History.
Thomas, W. H.	Buyer	$200 00	3 years with Republic Rubber Co.
Young, Thomas S.	General assistant	250.00	Formerly assistant manager of sales for Whitehall Cement Manufacturing Co.; New England manager of sales for Vulcanite Portland Cement Co.
Total		6,658.33	

COMMISSARY DEPARTMENT (W. O. No. 110).

Hartzell, P. N.	Commissary manager	$416.66	Formerly in charge of commissary at Keokuk, Big Creek, and San Antonio, and had charge of feeding the Salem fire sufferers.
Weaver, C. P.	Assistant commissary manager.	200.00	6 years with Stone & Webster: 2 years with Shell Oil Co. as civil engineer.
Total		616.66	

FABRICATING DEPARTMENT (W. O. No. 210).

Anderton, J. H.	Electrical engineer building of ships.	$625.00	Formerly electrical engineer Stone & Webster for 9 years.
Armstrong, R. E.	Chief checker	300.00	Formerly in business for himself 2 years; previously with Pencoyd and Pennsylvania Steel Cos. and New York Shipbuilding Co. checking drawings and making structural steel drawings.
Bailey, O. P.	Structural steel inspector	300.00	Formerly president of Bailey, Marsh Co., Minneapolis, for 8 years; previously estimator and superintendent for J. & W. A. Elliott Co., Minneapolis, and chief estimator Minneapolis Steel & Machinery Co.
Balcom, H. G.	Structural engineer	1,000.00	Formerly with Berlin Bridge Co., engineer in charge of design, American Bridge Co., structural engineer for Grand Central Station, New York.
Betts, Chas. E.	Squad chief on drafting	275.00	Formerly with Fore River Shipbuilding Co., Bethlehem Steel Co. (shipbuilding plant), Newport News Dry Dock Co. for 14 years as draftsman and all classes of construction work.
Bigelow, D. E.	Clerk	200.00	Formerly with Adam Co. as office manager and statistician. Previously statistician for 5 years with Poores Manual Co.
Blankenhorn, G. S.	Assistant to manager of machinery.	333.33	Formerly with Allis-Chalmers Mfg. Co. for 10 years as assistant to the chief mechanical consulting engineer of that company.
Brown, Dennis F.	Structural steel inspector	200.00	Formerly with American Hardware Co. for 10 years as superintendent of foundry; previously with American Bridge Co. as superintendent of forge department for 6 years.
Brown, F. L.	Material clerk (bills of material).	200.00	Formerly manager blue-print department St. Paul Foundry Co. for 8 years.
Burgum, H. P.	Structural steel inspector	250.00	Formerly with Bailey-Mark Co., Minneapolis, as estimator and engineer; previously with W. B. Lovell, Minneapolis, as estimator, for 8 years.
Cooper, F. A.	Steel inspector	250.00	Formerly with Guerper Engineering Co. as template foreman and general shop foreman for 2 years; previously with Ham Bridge Works for 5 years as template foreman.
Cunningham, J. E.	Superintendent of progress	275.00	Formerly designer steel and reinforced concrete with J. R. Worcester & Co.; assistant engineer in charge of construction Boston Elevated Ry.; mill engineer Willett, Sears & Co.; engineer with Fore River Shipbuilding Corporation.

Summary of overhead employees receiving $200 per month and over—Continued.

FABRICATING DEPARTMENT (W. O. No. 210)—Continued.

Name.	Position.	Rate per month.	History.
Davidson, T. R.	Assistant erector of machinery (now in designing office, Camden).	$250.00	Formerly with Cochran & Co., shipbuilders, Scotland, for 2 years; previously 8 years with various shipbuilding companies.
Davis, S. J.	Inspector (steel)	250.00	Formerly foreman steel erection, Cosden & Co. for 2½ years; previously erector for Oklahoma Iron Works.
Dawson, J. W.	Assistant to manager of hull fabrication.	500.00	Formerly with Lake & Torpedo Boats Co. as senior inspector; previously with Wm. Cramp & Sons, U. S. Navy Department, as inspector.
Dayton, Geo. S.	Engineer, assistant to Balcom.	333.33	Draftsman, checker, superintendent, and assistant engineer at following plants: Phoenix Bridge Co., Millican Bros., Post & McCord, New Jersey Steel & Iron Co., American Bridge Co.
Dembaugh, J. B.	Material clerk (bills of material).	200.00	Formerly with Colonial Navigation Co. for 8 years.
Dolan, C. J.	Steel inspector (structural)	250.00	Formerly with Wilkesbarre Structural Steel Co. as shop superintendent; previously for 5 years with Robert W. Hunt & Co. and New York Public Service Commission as inspector.
Dosdall, L. F.	Structural steel inspector	250.00	Formerly with New York, New Haven & Hartford R. R. as steel inspector; previously with McClintic-Marshall Co. for 17 years as shop foreman.
Dyer, E. F.	Assistant machinery superintendent.	300.00	Formerly with Lake Torpedo Boat Co. as general storekeeper for 4 years; previously with Fore River Shipbuilding Co. for 12 years as mechanical draftsman.
Ewing, W. M.	Structural steel inspector	200.00	Formerly with Lehigh Structural Steel Co. as manager; previously with General Construction Co. and McClintic-Marshall Co. as manager and designer.
Follows, A. E.	Correspondence clerk	225.00	Previously with Packard Motor Car Co., of Boston, as manager of specification department for 7 years; previously with Montreal Cotton Co. as private secretary to general manager.
Fouse, J. M.	Material inspection	300.00	Formerly with Dominion Bridge Co. as as assistant secretary for 4 years; previously with Carnegie Steel Co. for 3 years.
Gillette, G. L.	Manager hull fabrication	1,250.00	Formerly sales manager, Minneapolis Steel & Machinery Co.
Gillingham, G. L.	Inspector, fabrication	200.00	Formerly with H. N. Boureau Co. as office manager for 17 years.
Glines, E. S.	Office engineer in charge of drafting and bills of material.	450.00	Formerly designer and inspector with the Trussed Concrete Steel Co.; engineer with the General Electric; construction engineer with A. Wm. Sperry (Inc.); for several years chief draftsman with Stone & Webster.
Gribble, W. H.	Steel inspector	300.00	Formerly with the New York Public Service Commission as inspector for 3 years; previously with R. W. Hunt Co. and F. de P. Hone Co. as inspector for manager.
Harkrader, C. L.	Superintendent of material (assisting Gillette).	500.00	Formerly in charge of mill and office building details Minneapolis Steel & Mach. Co.; sales manager Motor Truck Sales Co.
Hasenbalg, H. B.	Leading draftsman (fabricating details).	275.00	Formerly with Riter-Conley Manufacturing Co. and Ellicott Machine Corp. as chief draftsman.
Helms, Peter E.	Structural steel inspector	250.00	Recently resigned.
Hill, Mark H.	Assistant superintendent of material.	333.33	Formerly with Kansas City Structural Steel Co. for 9 years as superintendent of erection and superintendent of deliveries.
Hoff, Geo. K.	Inspector (steel)	250.00	11 years with Pennsylvania R. R. as shop production and efficiency engineer.
Humsberger, S.	do	250.00	Formerly with city of Philadelphia as steel inspector for 2 years; previously with New York Connecting R. R. for 4 years in the same capacity; previously with Lewis F. Shoemaker & Co. for 8 years in general shopwork.

Summary of overhead employees receiving $200 per month and over—Continued.

FABRICATING DEPARTMENT (W. O. NO. 210)—Continued.

Name.	Position.	Rate per month.	History.
Hutchinson, W. M.	Inspector (steel)	$250.00	Formerly with Hildreth Co. and Southern Ry. as inspector; previously with F. de P. Hone Co. for 6 years in same capacity.
Jenkins, George	Assistant machinery superintendent (hull fittings).	350.00	Formerly with Bethlehem Steel Co. (shipbuilding plant), as draftsman; chief clerk and assistant to outside superintendent.
Johanson, A.	Structural steel inspector (following template making).	250.00	Formerly with Bethlehem Steel Co. for 9 years as template maker; previously with New York Shipbuilding Co. for 6 years.
Johnston, E. V. D.	Assistant secretary, fabricating department.	400.00	Assistant inspector of bridges, Pennsylvania Lines West; assistant master mechanic Jones & Laughlin; engineer for British South Africa Co.; mechanical engineer, maintenance department, Pennsylvania Steel Co.
Klossoski, T. J.	Production superintendent on machinery fabrication (piping).	416.67	Formerly with Western Canada Cement & Coal Co. as manager; previously with National Portland Cement Co. and Edmonton Portland Cement Co. on designing and supervising construction.
Koch, Charles	Leading draftsman	200.00	Formerly with United States Government, Philadelphia Navy Yard, as assistant chief draftsman, order department.
Little, Wm. H.	Requisition engineer	275.00	Formerly plant superintendent, Little & Baker Publication Co.; sump. superintendent, American Car & Foundry Co.; assembly and construction superintendent, Detroit Pressed Steel Co.
Lowe, H. L.	Fabricating engineer	500.00	Formerly engineer with Stone & Webster; previously assistant editor Cassier's Magazine; chief engineer De Lavergne Machine Co.; assistant professor Carnegie Technical Institute; research engineer, General Motor Co.; vice president, National Light & Power Co.
Meixell, C. S.	Steel inspector	300.00	Formerly with Hildreth Co. and Pittsburgh Testing Laboratory as inspector.
Meyers, J. S.	Assistant engineer	225.00	Formerly with Oil City Boiler Works, Chambersburg Engineering Co., New York Shipbuilding Co. as designer and chief draftsman.
McConnell, J. L.	Structural steel inspector	250.00	Formerly with Holobend & Ricke for nine years on designing and supervision.
McGranigham, J. R.	do	250.00	Formerly with United States Government, city of Philadelphia, Argentine Government, and Quebec Bridge Commission as inspector.
McKinley, Wm.	Assistant structural engineer (assistant to Balcom).	350.00	Formerly with Phoenix Iron Co., Maryland Steel Co., Boston Bridge Works, Jones & Laughlin, and assistant operating manager, American Bridge Co.
Nelson, J. A.	Assistant manager machinery fabrication (assistant to Carl Thomas).	500.00	Formerly with East Jersey Pipe Co., E. A. Gillespie Co., Union Iron Works Co., American Bridge Co. as superintendent, general manager, etc.
Pope, G. W.	Assistant manager hull fabrication (assistant to Gillette).	750.00	Formerly with Wisconsin Bridge & Iron Co., American Bridge Co., Virginia Bridge & Iron Co., Koken Iron Works, and contracting manager on structural steel for Minneapolis Steel & Machinery Co.
Primrose, C. L.	Chief draftsman	350.00	Formerly with Sargeant & Lundy, of Chicago, constructing engineers; one year squad chief with Stone & Webster; superintendent of construction; later Chicago agent for the Hoppe Feed Water Heater.
Raidabaugh, J. A.	Machinery engineer	300.00	Formerly with Bethlehem Steel Co. (shipbuilding plant), as machinery estimator, draftsman, etc., for 8 years; previously with Allis-Chalmers Co. as erecting engineer.

Summary of overhead employees receiving $200 per month and over—Continued.

FABRICATING DEPARMMENT (W. O. NO. 210)—Continued.

Name.	Position.	Rate per month.	History.
Richmond, R. N...	Leading draftsman.....	$250.00	Formerly with several companies in England as hull inspector, draftsman, superintendent, etc.
Rooney, Joseph....	Steel inspector.....	200.00	Formerly with Standard Steel Car Co. for 8 years; previously with Carnegie Steel Co. for 10 years.
Rowse, W. C.....	Assistant superintendent, production (machinery fabrication, ships' fittings).	300.00	Formerly with H. H. Franklin Manufacturing Co., in charge of experiment laboratory for 2 years; previously instructor mechanical engineering at University of Manitoba; previously as development engineer for the Cutler Hammer Manufacturing Co.
Santry, Jos.....	Superintendent machinery fabrication (auxiliary machinery).	625.00	Formerly sales agent in Boston for pumps, turbines, evaporators, water heaters, and other steam equipment.
Simpson, George...	Inspector.....	292.00	Formerly with E. F. Johnson 3 years, naval architect; previously with Holendon & Wolf for 9 years as general superintendent; previously Brooklyn Navy Yard for 3 years as superintendent.
Smith, E. Y.....	.....do.....	300.00	Formerly with McClintic-Marshall Co. for 13 years as superintendent.
Smith, O. C.....	Production superintendent (assistant to Gillette).	833.34	Formerly superintendent Minneapolis Plant, American Bridge Co.; superintendent structural department Minneapolis Steel & Machinery Co.; vice president Kansas City Structural Steel Co.
Stewart, G. W.....	Structural steel inspector....	250.00	Formerly with Bethlehem Steel Co. as inspector for 16 years.
Stewart, S. P.....	Assistant engineer.....	250.00	6½ years with Stewart Boiler Works, Worcester, as mechanical engineer and assistant manager.
Thomas, Carl.....	Manager machinery fabrication (chief marine engineer).	1,250.00	Professor mechanical engineering, Johns Hopkins University. Recently in charge of training engineers and deck officers for shipping board in district from New York to Norfolk. For many years in charge of marine engineering designing offices.
Twichell, L.....	Assistant production superintendent (assistant to O. C. Smith).	300.00	Formerly with Herzog Iron Works; previously with private practice as architect for 9 years; previously with Minneapolis Steel & Machinery Co. as construction manager.
Varker, Wm.....	Assistant secretary of department.	400.00	Formerly construction engineer Charlottesville & Albemarle Ry. Co.; manager Southern District Engineering & Development Co.; construction engineer Pennsylvania R. R. maintenance of way department.
Waite, George.....	Assistant engineer.....	275.00	Formerly with United States Government as local inspector of hulls at Providence, R. I.
Total.....	.....	22,767.00	

Senator JOHNSON. Pardon me, Senator Nelson, but there is one other question I wanted to ask, and I will then have concluded.

Senator NELSON. Certainly, go ahead; I did not want to interrupt you.

Senator JOHNSON. Do you deal with these gentlemen in any other capacity than as the representatives of this particular shipbuilding corporation? I mean by that, Admiral Bowles, are there any interlocking corporations in which they are the controlling interest, or a part of the controlling interest, as well as this shipbuilding corporation?

Admiral BOWLES. I will say yes.

Senator JOHNSON. And that corporation is what, please?

Admiral BOWLES. That is the New York Shipbuilding Co.

Senator JOHNSON. Well, are there any others?

Admiral BOWLES. Yes; I think there is one called the International Products Co., which has made a proposition to us, and we are about to negotiate with them.

Senator JOHNSON. The other day, in answer to a query of mine, I think it was stated that the financial backers of this particular corporation were the National City Bank of New York. Is that correct?

Admiral BOWLES. That I know nothing about.

Senator JOHNSON. You probably recall that Mr. Hurley made that response, do you not?

Admiral BOWLES. I do. It is common report, but I know nothing about it.

Senator JOHNSON. Now, the steel that is essential for these ships is furnished by the Government?

Admiral BOWLES. The orders are placed by the companies themselves; the Government pays the bill.

Senator JOHNSON. That is, the company places the order for the steel, but the bills are ultimately presented to the Government and paid by the Government?

Admiral BOWLES. Yes.

Senator JOHNSON. Now, I wanted to know whether or not these gentlemen who are in charge of the shipbuilding corporation are likewise connected with the Steel Corporation?

Admiral BOWLES. Not to my knowledge.

The CHAIRMAN. Does the New York Shipbuilding Co. continue its work at Camden, N. J.?

Admiral BOWLES. Yes.

The CHAIRMAN. They are building for the Government there?

Admiral BOWLES. Yes.

The CHAIRMAN. How many ships have they under contract there?

Admiral BOWLES. They have large contracts with the Navy, and our contracts for the Fleet Corporation I can show you. They are building at the present time requisitioned vessels, 23 in number, of an aggregate estimated cost of $12,495,000. In addition to that we have recently contracted with them for the construction of three transports.

The CHAIRMAN. They will need their organization at Camden?

Admiral BOWLES. They certainly will.

The CHAIRMAN. And the Government does not get very much benefit from that organization for the plant on Hog Island, then?

Admiral BOWLES. Well, the Government is obtaining very substantial assistance from the staff of the New York Ship Building Co. through the American International.

Senator NELSON. The American International, Admiral—this is the only shipbuilding they are engaged in, isn't it?

Admiral BOWLES. Directly.

Senator NELSON. And really the principal men of the other company, the New York company, formed this company for the purpose of getting this contract, didn't they?

Admiral BOWLES. I think not. I think the American International undertook this agency contract through their own efforts, and used the staff of the New York Ship Building Co. to assist them.

Senator NELSON. What is the date of this contract?

Admiral BOWLES. The date of this contract with them is September 13.

Senator NELSON. Under Admiral Capps's administration?

Admiral BOWLES. Yes.

The CHAIRMAN. Would it not be well to have that contract appear in the record?

Admiral BOWLES. Yes.

The CHAIRMAN. It is a sample of similar contracts. Is there any particular reason why that should not go in, Admiral?

Admiral BOWLES. No reason whatever.

The CHAIRMAN. What is the wish regarding this contract?

Senator JONES. I would like to see the contract go in, leaving out of the record the provisions within what time the ships shall be completed. That we can take up in executive session.

The CHAIRMAN. With that understanding, it will be put in.

Admiral BOWLES. Would it be more satisfactory, Mr. Chairman, if each Senator were furnished with a copy of this contract and it not put in the record at all?

Senator NELSON. Yes; that would be the best.

Senator JONES. I would like to see the whole contract in the record, aside from those provisions, myself.

The CHAIRMAN. Very well.

(The contract referred to is here printed in full, as follows:)

CONTRACT FOR CONSTRUCTION OF STANDARD TYPE COMPLETE VESSELS; COST-PROFIT SHARING.

[Contract No. 83 S. C. Hulls 492–541, incl.]

Contract made this 13th day of September, 1917, between American International Corporation, a corporation organized under the laws of the State of New York, party of the first part (herein called the agent), and United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia (herein called the owner), representing the United States of America, party of the second part.

Real estate.—Whereas the agent has agreed upon the execution hereof to acquire in fee certain real estate situated in Delaware County, Pa., located on the Delaware River near Philadelphia, back of the Mifflin Bar Dike and comprising part of what is known as Hog Island, and also certain land adjacent thereto west of Hog Island, which real estate consists of approximately 846 acres, whereof approximately 440 acres are owned by Charles N. Black, Francis H. Bohlen, and others, and approximately 406 acres are owned by Charles N. Black, which real estate will be fully described in the deed or deeds thereof, copies whereof, together with proof of the record thereof, the agent agrees to furnish to the owner as soon as possible and which is hereinafter called the "real estate"; and

Whereas the owner proposes to have constructed 50 or more cargo vessels of about 7,500 tons dead-weight capacity, in accordance with certain plans and specifications; and

Whereas the plans and specifications for said vessels, to be of uniform design, have been provided, adopted, and approved by the owner:

Now, therefore, this contract witnesseth that for and in consideration of the mutual agreements herein the parties hereto covenant and agree to and with each other as follows:

I. *Shipyard.*—The agent hereby agrees to construct and thereafter during the continuance of this contract maintain on the real estate such buildings, building slips, camp, commissary, hospital, plant, and appurtenances as may be necessary for the establishment of a shipyard and for the construction of 200 vessels in accordance with the aforesaid plans. The arrangement of buildings, building slips, camp, commissary, hospital, plant, and appurtenances shall be in ac-

cordance with plans and schedules to be mutually agreed upon by the parties hereto, and the construction thereof shall be subject to the inspection of the owner. The buildings, building slips, camp, commissary, hospital, plant, and appurtenances so constructed shall be and remain the property of the owner. The shipyard thus constituted shall be employed exclusively during the life of the contract on vessels for the owner, and the agent shall undertake no work for other parties at the shipyard, except with the written approval of the general manager of the owner.

The owner reserves the right to reduce, by written order given to the agent at any time within 60 days from and after the date of the execution of this contract, the proposed shipyard to such size and capacity as may be necessary for the construction of 50 vessels only, and in the event that the owner exercises this right the agent shall comply with the foregoing terms of this article as modified by such order.

II. *Organization.*—The agent will as expeditiously as possible organize a force of workmen, superintendents, and the administration necessary to carry out to completion the building of the vessels herein contracted for.

III. *Construction of vessels.*—As soon as the shipbuilding plant and organization are sufficiently advanced the agent shall proceed with the construction of 50 cargo vessels in accordance with the plans and specifications aforesaid, which are hereto attached and hereby made a part of this contract. The construction of said vessels (the word "vessel" as used throughout this contract being intended to include everything covered by the plans and specifications above referred to) shall conform in all respects to the aforesaid plans and specifications, including duly authorized changes therein. Said vessels shall be provided with fittings, equipment, machinery, devices, and appliances, and appurtenances of every kind with latest improvements, complete in all respects, and ready for service as provided for in the specifications, and shall be delivered to the owner afloat at the shipyard at Hog Island, near Philadelphia, Pa.

Alterations.—The owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions in the plans and specifications not materially affecting the general design of the vessels as the owner may deem necessary. The agent agrees to accede to and carry the same into effect as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. If by reason thereof the actual cost of the construction hereunder shall be increased, then the estimated basis cost shall be correspondingly increased. If the construction shall be rendered less expensive by reason thereof, the estimated basis cost shall be correspondingly decreased. The time for completion of each vessel shall be extended or decreased accordingly, as provided in Article IV hereof.

IV.

* * * * * * *

Premiums and liquidated damages.—Should the agent have completed and ready for delivery to the owner any of said 50 vessels before the time provided in the above schedule, the owner agrees to pay as premium for earlier delivery for each completed vessel so delivered the sum of $300 for each and every day gained by such early delivery. Should the agent fail to have ready for delivery any of the said 50 vessels within the period specified for its delivery in the foregoing schedule, the agent agrees to pay to the owner (as liquidated damages) on each vessel not completed and ready for delivery within said scheduled period $300 for each and every day of delay in delivery of such completed vessel, but it is hereby agreed that the total premium so to be paid for any such vessel shall in no case exceed the sum of $14,000, and that the total liquidated damages so to be paid for any such vessel shall in no case exceed the sum of $14,000 or be in excess of such sum as will reduce the net fee to be paid to the agent for such vessel, as hereinafter provided for, below the average minimum fee mentioned in Article XXV hereof. Premiums or liquidated damages shall be added to or subtracted, so far as possible, from the final payment of the agent's fee herein provided for.

Extensions of time.—If the agent be delayed or obstructed in the performance or completion of the work provided for by this contract by the delay, neglect, or default of the owner, or by reason of alterations or additions by the owner, or the commandeering by the United States Government of materials on the ground or materials purchased or contracted for by the agent or owner but not delivered, or of facilities for the transportation of material and

(or) laborers, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by any other cause beyond the control of the agent so that the time of delivery of any of the vessels shall be delayed beyond the scheduled period for its delivery, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof: *Provided*, That no such extension of time shall be granted for any particular delay unless the agent shall, within 10 days after the occurrence of such delay, notify the owner in writing of intent to claim such extension.

All extensions of time for the delivery of any of the vessels herein contracted for shall correspondingly postpone the dates at which liquidated damages on account of delays in delivery shall begin to accrue, but premiums shall be paid only in the event of completion and delivery of the vessels within the times specified in the above schedule, and no extension of time for any cause whatever shall operate to entitle the agent to premiums for early delivery, except that if the agent shall establish to the satisfaction of the owner that any delay has been caused solely because of changes ordered or instructions given by the owner or because of any default of the owner, the owner will consider extending the times within which premiums may be earned by the agent: *Provided*, That if the agent shall establish to the satisfaction of the general manager of the owner that actual delay in the completion of any of the 50 vessels herein contracted for has been exclusively caused by the fitting out of wooden hulls as provided for in Article XXVIII, such delay will be regarded as extending by the length of such delay the time in which premiums on each vessel so delayed may be earned by the agent.

V. *Contracts for materials, etc.*—The owner reserves the right to control through its duly authorized representative all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement or in its own name to make any such order, purchase, or commitment, subject to advice to the agent so as to avoid duplication. All contracts and orders placed by the agent shall be in the name of the owner by the agent.

Payment for materials.—Such materials and parts to be used in the construction of the shipyard and of the vessels as are ordered by the agent shall be received and payment therefor made by the agent from the funds deposited by the owner, as provided for in Article XVII, direct to the individual, firm, or corporation with whom the order has been placed, at the price stipulated in the order and in accordance with such terms of payment as may be arranged by the agent with such individual, firm, or corporation. Any amounts paid for materials and parts to be used in the original construction of the shipyard will enter into the actual cost of the shipyard. Any amounts paid for materials and parts to be used in the construction of the vessels will enter into the actual cost of the vessels, as hereinafter provided for.

Quality of materials.—Such materials and parts to be used in the construction of the vessels shall be of the quality and characteristics best adapted to the various purposes for which they may be used, in so far as they conform to the requirements and specifications of the American Bureau of Shipping and (or) Lloyd's. The agent shall supply such assistance as may be required by the surveyors of the American Bureau of Shipping and (or) by inspectors of Lloyd's and (or) of the owner in making any tests and inspections of such materials and parts at the shipyard considered necessary by such inspectors or surveyors.

VI. *Workmanship.*—The workmanship on said vessels in detail and finish in all parts shall be first class and of the very best quality usual in American seagoing vessels of this class, and shall at all times be subject to the inspection of the American Bureau of Shipping and (or) Lloyd's and of the owner's inspectors as aforesaid, and the surveyors and inspectors may, with the approval of the owner or his duly authorized representative, direct the replacement of any unfit workmanship or materials if below the standard of the American Bureau of Shipping and (or) Lloyds for vessels of this class.

VII. *Inspection.*—The vessels shall be inspected during the progress of the work by the surveyors of the American Bureau of Shipping and (or) by the inspectors of Lloyd's, and the inspection certificates of the highest rating of these organizations for seagoing vessels must be obtained and furnished when the vessels are ready for delivery. Tonnage certificates in duplicate shall also be obtained from the Commissioner of Navigation and furnished at the time of delivery of the vessels to the owner. All expenses of such inspection

and certificates shall be considered as part of the actual cost of the vessel. In addition to the surveyors of the American Bureau of Shipping and (or) inspectors of Lloyd's the owner will employ at the owner's expense, but not to be included in actual cost, one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these vessels. They and their assistant, described herein as the owner's inspectors, will represent the owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the owner will act as representative of the owner and be designated as the district officer, and to him shall be referred all questions arising under the contract at the shipyard. His decision on all important questions shall be in writing, and when rendered under his general authority or after approval by the owner shall be binding, subject in all cases to appeal as provided in Article XXII hereof.

VIII. *Trials.*—When each vessel is substantially complete, it shall be given a dock trial of not less than eight hours' duration. Should any defects or deficiencies develop during such trial, they shall be corrected by the agent to the satisfaction of the owner, and the dock trial repeated if considered necessary by the district officer. The owner may designate any number of vessels as a group and may select one vessel from such group to be tried on a measured mile course in the vicinity of the shipyard, in addition to the dock trial provided above, and its satisfactory performance as to speed and working of machinery shall be taken as representative of the speed and machinery performance of the said group of vessels. If the vessel selected shall not satisfactorily perform such test, the owner may direct that any or all vessels of the group be given speed and machinery tests of a like character. The agent agrees to take such additional steps as the owner may require to increase the speed of any vessel up to the speed specified in the specifications.

Delivery.—After the satisfactory completion of the trials and of all other work included in the plans, specifications, and authorized changes, each vessel shall be delivered afloat to the representative of the owner at the shipyard and shall thereupon be accepted, and the owner shall take possession of the vessel and be responsible for the safety thereof. The owner shall remove such accepted vessel from the shipyard within such time as will prevent encumbrance of the waterfront or interference with the work on other vessels.

IX. *Termination of contract.*—In case of failure (omission) of the agent at any stage of the work prior to completion, from any cause or causes within its control, to go forward with the work and (or) make progress toward its completion satisfactory to the owner, the owner may terminate this contract. In that event the owner may immediately enter the shipyard and take possession of it and of the vessels, materials, and equipment, and also withdraw without the signature of the agent any balance on hand in any agent-trustee account established under Article XVII hereof, and shall assume all commitments properly chargeable to the work hereunder. The owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the vessels and of all materials on hand or ordered or contracted for and applicable thereto, and a copy of such statement and inventory shall be furnished to the agent. Concurrently with the making of such statement and inventory, the owner may proceed with the construction of vessels either at the shipyard, with its equipment and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the owner shall thus terminate this contract the total amount to be paid hereunder, including all payments theretofore made, shall be the actual cost (computed in the manner defined in Article XIX hereof) of all work done under this contract up to the time of termination, plus such part of the agent's fees as the owner may decide to have been justly earned, plus the rental for the "real estate," which, after said termination, is used by the owner.

At the conclusion of such work as the owner may decide to do at the shipyard after terminating this contract, the appraisal provided for in Article XXI shall be made and the options referred to in said article shall become operative: *Provided, however,* That if within 15 days after written notice to the agent by the owner of the latter's intent to terminate this contract the agent can show to the satisfaction of the general manager of the owner reasonable industry and good faith in the prosecution of the work hereunder and that the delays have been caused by circumstances over which it had no control,

the agent shall be allowed such opportunity as the general manager of the owner may deem reasonable to complete the work.

X. *Insurance.*—The agent agrees to procure, so far as procurable, and thereafter maintain such insurance, in such forms, on such property, to cover such contingencies, in such amounts, and for such periods as the owner shall approve or require. The policies shall provide that the loss, if any, shall be payable to the owner for the use of the owner and (or) the agent, as their respective interests may appear. In the event that the owner shall see fit to dispense with insurance, in whole or in part, on its own property, the estimated basis cost, as set out in Article XX, shall be diminished by such a sum as the general manager of the owner deems fair and just. Should any vessel be constructively or actually a total loss, no additional vessel shall be built under this contract in order to replace it and to complete the 50 vessels herein provided for. The owner shall pay within 30 days after such total loss, to the agent on account of fee for work previously done on any vessel so lost, such sum as the general manager of the owner may determine to be fair and just.

XI. *Casualty insurance.*—The agent agrees to insure to the satisfaction of the owner, so far as insurance shall be procurable, against the liability of the agent and (or) the owner for injuries to or death of employees, workmen, or the public, or others in or about the work covered by this contract. The agent shall to the best of its ability protect the owner against claims for any infringements of patents or patent rights and for the use of any patented articles embodied or to be embodied in the vessels, by suitable agreements satisfactory to the owner as to the use of such patents or patent rights. The owner will assume all costs, expenses, and damages which it or the agent may be obliged to pay to procure such agreements or to pay by reason of any infringement of patents or patent rights or the use of patented articles not covered by such agreements, pursuant to a decree by a proper court in any litigation involving the use of such patents, but the agent shall assist the owner, at the latter's expense, save for services of the agent's employees, in furnishing such evidence as to the use of the patents and other matters of fact as may be required by the owner in such litigation. The agent shall promptly notify the owner in writing of any claims of infringement that it may from time to time be brought to the agent's attention.

XII. *Labor.*—The agent will comply with all instructions not contrary to law as to wages or conditions of employment of labor on this contract given to it in writing by the owner. If by reason of any such instruction the cost of any vessel hereunder shall be increased, then the estimated basis cost shall be correspondingly increased as provided in Article XX. The owner, in its discretion, will give such assistance as shall be within its power in securing and retaining the labor necessary for the work under this contract. The agent will promptly notify the owner of any labor difficulties.

XIII. *Protection to property.*—The agent shall provide the usual protection for the property of the owner and of the agent at the shipyard, and shall furnish such additional protection as the owner may require; such additional protection, however, shall be paid for by the owner, but shall not be included in the actual cost of the work to be done under this contract for the purpose of comparison with the estimated or revised estimated basis cost.

XIV. *Owner to use powers for expedition.*—The owner will, in its discretion, use its influence and such powers as it may have by law to secure with the utmost practicable expedition and at the minimum cost, consistent with the existing conditions, the facilities, utilities, parts, materials, and supplies required for the work under this contract, and will in its discretion also use its influence and powers to secure rapid and (or) preferential transportation from any and all railroad companies and public-service companies for workmen, employees, materials, parts, and supplies required for the work.

XV. *Title.*—It is agreed that title to all vessels either completed or under construction, in so far as they shall have been inspected and approved by the owner shall be in the United States of America and that the title to all material for the furtherance of work under this contract however and by whomsoever contracted for or assembled or set up in the shipyard or used in the construction of work under this contract shall be in the owner, at all times. Nothing contained herein, however, shall be construed as a waiver by the owner of its right to direct the replacement of unsatisfactory workmanship and (or) materials.

Inspector's certificates.—No inspector's certificate given or payment made under the terms of this contract (except on final payment) shall be conclusive evidence of the performance of this contract either in whole or in part, and no payment shall be construed to be a waiver of the right of the owner to direct the replacement of unsatisfactory workmanship and (or) materials.

XVI. *Liens.*—The agent will keep the vessels in the course of construction free and clear from all claims, liens, or encumbrances of any kind or description (except liens or encumbrances accruing through the default of the owner, and (or) for the existence of which the owner shall be responsible and except claims and liens of the agent), and shall, before delivery of each vessel, show to the satisfaction of the owner that such vessel is free and clear from any claims, liens, and encumbrances, except as aforesaid. The agent agrees that it will, to the extent that funds are available under the terms of Article XVII, promptly pay for all labor, material, or other service rendered to it in connection with the work under this contract.

XVII. *Payment of actual cost.*—The total actual cost (as defined in Article XIX) of constructing said buildings, building slips, camp, commissary, hospital, plant, and appurtenances, and the total actual cost of constructing the vessels herein contracted for, shall be paid by the owner to the agent as follows:

Establishment of cash fund.—In order to provide the cash funds necessary for carrying on the work under this contract the owner will from time to time deposit in advance to the credit of the agent as trustee for the purposes of this contract, in such bank or banks as may be agreed upon, such sums as may be necessary to constitute and to keep constituted a fund from which to finance the work, to provide for payments to be made for the buildings, building slips, camp, commissary, hospital, plant, and appurtenances to be erected and installed on the real estate, for materials, and for wages and salaries of persons exclusively employed upon the work hereunder at the shipyard and at the agent's Philadelphia office. Such sums shall be drawn upon only by checks countersigned by the district officer or the owner's representative for payments to be made by the agent under this contract, and each payment shall be charged against the buildings, building slips, camp, commissary, hospital, plant, and appurtenances the property of the owner, or as a payment on account of the cost of the vessels as the case may be. Any interest paid by the bank or banks on such deposits is the property of the owner, and upon the final completion of this contract the owner may withdraw without the signature of the agent any balance on hand in any agent-trustee account established under this article. The agent shall file with the owner an indemnity bond, secured by a first mortgage on the "real estate" the property of the agent at Hog Island, near Philadelphia, Pa., which shall secure to the owner the proper application of all funds placed to the credit of the agent as aforesaid.

Upon the purchase of the real estate by the owner, or if the owner shall fail or refuse to keep and perform its obligations to purchase or to exercise its option to purchase the real estate under the provisions of Article XXI hereof upon completion of the work hereunder, as the case may be, the owner shall, if the agent so requests, satisfy and discharge of record said bond and mortgages: *Provided, however,* That the agent shall, as a condition precedent to its right to such satisfaction and discharge, furnish to the owner a bond with good and sufficient sureties in such sum as the general manager of the owner may require in lieu of the aforesaid indemnity bond.

Other payments.—For other items of actual cost, including those incurred in outside offices chargeable to the work under this contract but not paid from the aforesaid funds, and the rental for the "real estate," payment shall be made to the agent by the owner monthly within 15 days after the submission of bills covering such actual costs, certified to by the district officer. The agent's fee shall be payable at the times and in the manner specified hereinafter.

XVIII. *Accounts.*—The agent shall establish and keep suitable accounts and records which shall show the actual cost of all the work under this contract. The preservation of said accounts and records for a reasonable time shall be provided for by agreement of the parties at the termination of this contract.

The accounts and records of the agent shall at all reasonable times be open to inspection by the owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the agent in such form and supported by such original papers as may be required by the general manager of the owner. The methods and principles of keeping costs shall be adequate for the determination of actual costs. All information obtained from the accounts and records shall be treated as confidential.

Auditors.—The owner may send auditors to the shipyard and to the agent's offices to supervise and assist in the accounting.

Account and inventory of plant.—The actual cost of constructing the building, building slips, camp, commissary, hospital, plant and appurtenances, and of alterations and additions thereto, shall be computed in the manner defined in Article XIX hereof and shall be kept in a separate detailed plant cost account and inventory.

Account of vessels.—The actual cost of the 50 vessels herein contracted for shall also be computed in the manner defined in Article XIX hereof and shall be kept in such manner and segregated into such items as may be necessary for the purposes of this contract and as may be agreed upon, and particularly as may be necessary for the ascertainment of the agent's fee on each vessel hereinafter provided for.

XIX. *Actual cost.*—For the purpose of this contract actual cost, whether of the construction of the shipyard or of the construction of vessels (the latter to include the maintenance and operation of the shipyard in its entirety), is defined as follows:

1. The net costs, after deducting all discounts obtained, of supplies, materials, machinery, tools, equipment, and parts thereof directly entering into or expended in the execution of the work, including freight and other transportation costs of materials, and of the other items in this paragraph enumerated.

2. Costs of direct labor employed in the execution of the work.

3. *Overhead expenses.*—These shall be taken to include indirect labor and materials and the general and administrative expenses and other expenses applicable to and necessary in connection with the execution of the work herein contracted for (including in actual cost the maintenance, operation, and repair of buildings, building slips, camp, commissary, hospital, plant, and appurtenances).

Specifically, the overhead expenses shall include the following:

(*a*) All items of overhead expense contained in the schedule of the estimated basis cost annexed to and forming part of this contract, with such modifications as may be mutually agreed upon, but in accordance with the general principles laid down in this paragraph 3.

(*b*) The rent of the real estate during such period as it may be used in the execution of the work hereunder, which shall be at the rate of $102,360 per year, such sum being 6 per cent of the actual cost to the agent of the acquisition of the real estate.

(*c*) Taxes and assessments of every kind (except for permanent improvements) imposed on the real estate, buildings, building slips, camp, commissary, hospital, plant, and appurtenances constituting the shipyard or arising from any of the operations included in the work to be done under this contract, including license fees, but excluding all Federal taxes, which latter shall be borne by the agent without reimbursement.

(*d*) Subject to the rules hereinafter stated, transportation of laborers and (or) employees, salaries and expenses of the agent's general manager, purchasing and traffic agencies, engineering and drafting forces, and accounting and clerical forces employed and maintained by the agent at its offices in Philadelphia and at the shipyard exclusively on the work hereunder, and an equitable proportion of salaries and expenses of other similar agencies and forces employed and maintained by the agent at said offices or elsewhere; but the agent's fee herein provided for shall cover the services of its executive officers, who for the purposes of this contract shall be deemed to include its president, its board of directors, vice presidents, treasurer, and secretary, and their respective assistants not immediately attached to the shipyard, and their salaries and emoluments shall not be chargeable to the work under this contract.

(*e*) The cost of casualty and liability insurance and the cost of such bonds, fire and other insurance as the owner may approve or require; all losses due to accidents or casualties not compensated by insurance or otherwise and legal and other expenses in connection therewith sustained or incurred by the agent, including the cost of settlements made with the approval of the owner, and the cost of the removal and replacement of defective or unsatisfactory workmanship or materials; but if any such losses and expenses and (or) necessity for any such replacement shall be caused by the fault or neglect of the agent's executive officers, managerial and superintending employees, foremen, and leading men, there shall be deducted from the agent's fee such part

of such losses and (or) cost of such replacement as, together with deductions under Articles IV and XX, shall not result in an aggregate average deduction from such fee of more than $14,000 for each vessel or reduce the agent's average fee for vessels constructed hereunder below the minimum fee provided for in Article XXV hereof.

The following rules are hereby mutually agreed to and shall be followed with reference to actual cost:

Excessive and unusual salaries or emoluments shall not be paid by the agent or charged as a part of the actual cost.

The rent of the real estate being allowed for in actual cost, no depreciation or appreciation of its value shall be allowed as part of the cost.

The overhead charges incurred in the work under this contract shall be equitably prorated between and charged to the actual cost of the shipyard and the actual cost of the vessels, as the case may be.

The buildings, building slips, camp, commissary, hospital, plant, and appurtenances being the property of the owner, no charge on account of their use by the agent shall be made nor shall any charge for depreciation of such buildings, building slips, camp, commissary, hospital, plant, and appurtenances be allowed as part of the cost to the agent, but such repairs, renewals, and upkeep to the buildings, building slips, camp, commissary, hospital, plant, and appurtenances as may be necessary during the life of this contract shall be considered as part of the overhead expense on the vessels as aforesaid.

All materials and supplies purchased for but not used in the construction of the vessels herein contracted for shall be and remain the property of the owner and the value thereof shall be credited on the cost of the vessels. The salvage value of scrap, waste, containers, etc., originally purchased for the shipyard and (or) vessels and disposed of during the life of the contract shall be credited to the cost of the shipyard and (or) of the vessels, as the case may be.

All revenue, if any, from the operation of the camp, commissary, hospital, and other facilities or from rebates, refunds, etc., shall be accounted for by the agent to the owner and applied in reduction of the cost of the vessels or of the buildings, building slips, camp, commissary, hospital plant, and appurtenances, as the case may be.

XX. *Agent's fees.*—The amount of the fee to be paid the agent for services (exclusive of the rental value of the "real estate" hereinbefore specified, and subject to additions or subtractions as provided in this contract) is based upon a schedule of the estimated basis cost of each of said 50 vessels to be constructed under this contract, which is hereto annexed and forms a part of this contract.

Estimated basis cost.—Such estimated basis cost is $1,100,000, as set forth in detail in said schedule containing the estimated costs of labor, of materials, and of overhead expense. Should the actual cost of materials, and (or) the rates of wages paid be different from those set forth in the aforesaid schedule, the estimated total material basis cost shall be increased or diminished by the actual amount of the change in cost of the materials, and the estimated total labor basis cost shall be increased or diminished in the ratio that the rates of wages actually paid bear to the original schedule rates of labor. The estimated basis cost shall also be revised on account of any changes ordered as provided in Articles III and XII. Should such revisions be made the new estimated cost shall be considered as the revise estimated basis cost. Should the actual cost as ascertained by audit of the books and accounts of the agent be equal to the revised estimated basis cost, the aforesaid fee payable to the agent shall be $55,000 on each of said 50 vessels completed, subject to additions and subtractions as elsewhere provided in this contract. Should the actual cost upon audit be less than the revised estimated basis cost, such saving shall be divided into three equal parts, one of which shall accrue to the agent, one to the owner, and the third shall be distributed in such manner as may be directed by the owner, with a view to recognizing faithful and efficient performance of duty on the part of workmen and employees. Should the actual cost as ascertained by the aforesaid audit be greater than the revised estimated basis cost, one-half of such increase shall be deducted from the agent's fee aforesaid, and the remainder shall be borne by the owner: *Provided*, That in no case shall the agent's fee for each of said 50 completed vessels, after making all deductions and (or) additions provided for in any article hereof, be less than the average minimum fee mentioned in Article XXV hereof. Said fee on each vessel shall be payable to the agent as follows, viz:

One-half of the minimum fee when the vessel is half finished, as certified to by the district officer, or otherwise established to the satisfaction of the general manager of the owner, and one-half of such minimum fee upon the completion of satisfactory trials, and the remainder, if any, upon audit of the actual cost of the vessel as above provided for.

XXI. *Additional vessels.*—The owner may at its option at any time not less than 60 days prior to the completion of all vessels theretofore contracted for or ordered under this contract, order additional vessels of the same or different size and type to be built by the agent at said shipyard. (The agent shall give the owner 15 days' notice in writing of the expiration of the time for the exercise of the owner's option to order additional vessels.) Except as to estimated basis cost, the amount of the agent's fee, times for completion and readiness for delivery, and (when such additional vessels are of a different size and (or) type from those herein contracted for) the plans and specifications therefor, such additional vessels shall be constructed under the terms and provisions covering the first 50 vessels under this contract. Should the owner order additional vessels the shipyard shall be used and the actual cost of the vessels be paid for in the manner herein provided for the first 50 vessels under this contract.

The estimated basis cost for each of the 150 or lesser number of additional vessels of the same size and type as those herein contracted for shall be $1,050,000 and the normal fee of the agent for the construction of each thereof shall be $52,500, to which shall be added the savings and (or) premiums and from which shall be subtracted the deductions and (or) liquidated damages, in neither case exceeding an average of $14,000 for each vessel as provided in other articles hereof; the agent's average fee, however, to be not less than $38,500 for each vessel. For all additional vessels of the same size and type in excess of 150 and for all additional vessels of a different size and (or) type ordered by the owner under this Article XXI, the estimated basis cost, the amount of the agent's fee, the time of delivery, and (when such vessels are of a different size and (or) type) the plans and specifications therefor shall be the subject of mutual agreement; but the agent's fee shall in no case be greater for the same size and type of vessel than the fee in this Article XXI provided for.

Not less than 60 days prior to the completion of all vessels theretofore contracted for or ordered hereunder the owner shall notify the agent in writing whether it desires any additional vessels constructed as in this article provided and the number of additional vessels, if any, which it desires to have built. If at the time of the completion of the work hereunder less than 100 additional vessels shall have been ordered by the owner under this article, then the owner shall forthwith purchase the "real estate" from the agent and pay to the agent therefor the amount of the original cost of the acquisition thereof by the agent, to wit, the sum of $1,706,000, plus any further sum in excess of $110,000 which the agent may be obliged to pay to the Commonwealth of Pennsylvania for a patent or patents for a certain part of the real estate the title to which is now in controversy, and in addition thereto the amount of any assessments or taxes paid by the agent on account of permanent improvements, and upon such payment the agent shall convey the real estate to the owner by good and sufficient warranty deed. In case the owner shall in such event fail to purchase and pay for the "real estate" as aforesaid within 60 days, then and in that event all buildings, building slips, and other permanent improvements and structures then located upon the real estate shall become and be the property of the agent.

Options.—If upon the completion of the work hereunder the owner shall have ordered 100 or more additional vessels under this article, then and in that event the options hereinafter expressed in this article shall become effective. In such event the owner shall, not less than 60 days before the completion of the work hereunder, appoint an appraiser, and the agent shall likewise appoint an appraiser within 5 days after written notice of the appointment of such appraiser by the owner, and the two appraisers so chosen shall select a third. If either party shall fail to appoint an appraiser as aforesaid, the other party may select a second appraiser, and the two so selected shall choose a third as aforesaid. The three appraisers so appointed shall appraise the then value of the buildings, building slips, camp, commissary, hospital, plant, and appurtenances, the property of the owner, as shown by the detailed plant cost account and inventory kept by the agent as herein provided for in Article XVIII, and also of parts, materials, supplies, and scrap purchased for the work on the

vessels, but not incorporated or to be incorporated in them on completion, or otherwise disposed of under this contract.

The appraisers shall take into consideration the actual costs as shown by the inventory which shall be furnished them, the conditions as regards wear and tear and depreciation, the desirability of the buildings, building slips, camp, commissary, hospital, plant, and appurtenances for the purposes of a shipyard, their replacement value at market prices at the time of the appraisal, and the condition of the shipbuilding business generally with reference to the going value of a constituted shipyard at the time of the appraisal. The appraisers shall complete their appraisal and deliver one copy thereof to the owner and one to the agent within 30 days after their appointment.

Within 15 days from the receipt of said appraisal, the owner shall notify the agent in writing whether it elects to purchase for cash the "real estate" of the agent, as defined and described in the preamble to this contract, at the original cost of its acquisition by the agent, viz, $1,706,000 plus any further sum in excess of $110,000, which the agent may be obliged to pay to the Commonwealth of Pennsylvania as aforesaid and plus also all assessments and taxes paid by the agent for permanent improvements made during the term of this contract. If the owner elects to purchase said "real estate" the agent shall convey the same to the owner by good and sufficient warranty deed and the owner shall pay therefor, in cash, within 30 days after giving such notice.

Should the owner notify the agent that it elects not to purchase said "real estate," or fails to so notify the agent of its election, then the agent, within 15 days thereafter, shall notify the owner in writing whether it elects to purchase, for cash, the buildings, building slips, camp, commissary, hospital, plant, and appurtenances, the property of the owner, together with the parts, materials, supplies, and scrap, at the value thereof, as fixed by said appraisal.

Should the agent elect to purchase the aforesaid buildings, building slips, camp, commissary, hospital, plant, and appurtenances, together with the parts, materials, supplies, and scrap at the appraised value thereof, said property shall be conveyed by the owner to the agent and the purchase price thereof paid, in cash, by the agent to the owner within 30 days after such notice of its election to purchase.

Should neither the owner nor the agent exercise their respective options to purchase the property of the other, or should either the owner or the agent elect to purchase the property of the other, but fail to pay the purchase price therefor within said period of 30 days or as soon after such period of 30 days as the deed herein shall have been tendered, then and in either of said events, the owner shall forthwith remove from the "real estate" all of the buildings, building slips, camp, commissary, hospital, plant, appurtenances, and parts, materials, supplies, and scrap, the property of the owner, and readily removable, and thereupon the owner shall have no further title to, or interest in, said "real estate" belonging to the agent, or to or in said shipyard.

XXII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning, construction, or effect of this contract or of any of the provisions or covenants hereof, or of the plans and specifications which are a part hereof, or as to the manner of doing the work provided for hereunder, or as to the materials used or to be used, or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by the general manager of the owner and his decision in writing shall be final and binding upon the parties except as hereinafter provided.

In case after delivery of a completed vessel to the owner under this contract (but only in that event) the agent shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind regarding such vessel and shall give written notice to the owner to that effect within 30 days after delivery of such vessel to, or after final payment for such vessel by the owner, and (or) in case after completion of all work of constructing the shipyard (but only in that event) the agent shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind regarding such construction and shall give written notice to the owner to that effect within 30 days after completion of all such construction, such matter shall be determined by a board which shall consist of

three disinterested naval architects or engineers or experts to be appointed, one by the owner, one by the agent, and the third by the two so appointed. Such board shall within 30 days after submission of such matter to it make its determination, and its finding (made by a majority of the board) shall be conclusive on both parties: *Provided, however,* That if the agent fails to notify the owner in writing of its intent subsequently to appeal any decision of the general manager, adverse to it, within 10 days after written notice of such adverse decision, the decision of the general manager shall become final and binding upon both parties without appeal to the board herein provided for. The cost of any such arbitration shall be borne equally by the owner and the agent.

XXIII. *Not assignable.*—This contract shall not, nor shall any interest herein, be transferred by the agent to any other person or persons save with the consent of the owner in writing.

XXIV. *Notices and payments by mail.*—All notices in writing from the agent to the owner shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to the United States Shipping Board Emergency Fleet Corporation at Washington, D. C., or be delivered personally to an executive officer or the district officer of the owner.

All notices from the owner to the agent shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to American International Corporation at 120 Broadway, New York City, or be delivered personally to an executive officer of the agent.

Payments hereunder required to be made direct to the agent shall be made by the owner by check addressed to the agent by mail at 120 Broaway, New York City.

XXV. *Minimum fee.*—It is the intention of this contract that, notwithstanding any other provision thereof, the agent's fee shall average not less than $41,000 for each vessel completed and accepted, but this shall apply only to the 50 vessels first provided for; and the agent's fee for the first 150 or lesser number of additional vessels of the same size and type as those herein contracted for shall average not less than $38,500 for each such vessel completed and accepted as provided in Article XXI hereof.

XXVI. *Protection of owner's interest.*—The agent, in all its acts hereunder, shall use its best efforts to protect and subserve the interests of the owner. The agent hereby agrees that it will procure all necessary permits and licenses, and obey and abide by all laws, regulations, ordinances, and other rules applying to such work, of the United States of America, of the State or Territory wherein such work is done, of any subdivision thereof, or of any duly constituted public authority.

XXVII. *Control by owner.*—The agent shall in the performance of its agreements hereunder comply with and be bound by all directions, instructions, and decisions of the owner, or its authorized representatives; and compliance by the agent with any such direction, instruction, or decision shall be a justification and protection to the agent for any action so taken.

XXVIII. *Fitting out wooden hulls.*—The owner may, when the construction of vessels hereunder will not thereby be materially delayed, bring to the shipyard wooden hulls for the purpose of installing machinery therein and equipping them ready for use. The owner may at its option do such work itself, or may, upon terms to be mutually agreed upon, require the agent to do it.

XXIX. *Participation in profits.*—No Member or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this article shall not apply to this contract so far as it may be within the operation or exception of section 116 of the act of Congress approved March 4, 1909 (35 Stats., 1109).

XXX. *Provisions to be added if desired.*—This contract is executed and delivered upon the understanding that, if desired by the United States Shipping Board Emergency Fleet Corporation, a provision, satisfactory in form and terms to the United States Shipping Board Emergency Fleet Corporation, restricting the hours of labor of laborers and mechanics employed by the agent or by subcontractors and (or) providing for the payment of extra compensation for overtime work, shall be inserted in the contract, with the same force and effect as if inserted in the contract before the execution and delivery thereof.

In witness whereof the parties have caused these presents to be executed in triplicate by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

AMERICAN INTERNATIONAL CORPORATION,
By CHARLES A. STONE, *President.*

O. K. D. P. R.
[SEAL.]
Attest:

JOSEPH S. LOVERING,
Assistant Secretary.

Countersigned:
F. A. VANDERLIP, *Director.*

UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION,
By EDWARD N. HURLEY, *President.*

O. K. W. L. C.
[SEAL.]
Attest:

LESTER SISLER, *Secretary.*

Schedule of estimated basis cost.

1. Material f. o. b. yard (details attached hereto)	$570,000
2. Direct labor, 740,000 hours, at 37 cents	275,000
This average rate is based on the weighted average of detail rates shown in the attached schedule. For comparative purposes the actual average rate shall be obtained by dividing the total labor cost by the total hours of labor.	
3. Overheads (schedule of items attached)	255,000
Total	1,100,000

Schedule of material costs.

HULL.

Spoiled material	$1,000
Launching	2,000
Temporary service and maintenance	2,000
Steel for hull	160,000
Stern, stern frame, and rudder frame, etc	16,000
Other hull work, etc	50,000
Carpenter and joiner work, etc	80,000

HULL OUTFITTING.

Side lights	2,000
Doors and hatch fittings	3,000
Deck castings	2,000
Miscellaneous fittings	11,000
Cook's, steward's pantry outfit, portable furniture, etc	8,000
Anchors and chain	18,000
Deck outfit	12,000
Rigging	2,000
Awnings and covers	1,000
Heating system	1,500
Ventilating system	1,500
Refrigerating system, etc	4,000
Sanitary and fresh-water systems	3,000
Fire system	2,000
Bilge and ballast systems	6,000
Communicating systems	2,000
Painting steelwork	1,000
Cementing	3,000
Galvanizing and nickel plating	1,000
Nonconducting material	2,000

MACHINERY.

Spoiled material	$500
Trials	500
Temporary firing and maintenance	500

PROPELLING MACHINERY.

Main turbines and gear, etc	72,000
Main condensers, etc	8,000
Oiling gear and water service	7,000
Shafting and bearings	7,000
Propeller wheels	1,500
Hoisting and handling gear	1,000
Flor plates, ladders, and gratings, etc	2,500
Independent machinery, etc	18,000
Engineer's outfit and workshop machinery	1,000
Main boilers, furnaces, and fittings, etc	48,000
Fuel-oil system	1,500
Uptakes and stacks, main and auxiliary	1,500
Copper and brass piping	5,000
Iron and steel piping	2,000
Stop valves and cocks	3,000
Coverings and lagging, pipes, and valves	1,000
Miscellaneous	2,500

AUXIHARY MACHINERY.

Steam exhaust piping to deck machinery	1,500
Steering gear and transmission	7,000
Windlasses and capstans	7,000
Winches and cargo-handling gear, etc	9,000
Electric plant, etc	7,500
Spares for machinery	7,000
Total	570,000

Detail schedule of wage rates in force at New York Shipbuilding Corporation in July, 1917.

Hull department:	Cents.
Ship carpenters—	
Leaders	64
Carpenters	39
Stage builders	36
Helpers	33
Apprentices	16
Ship erectors—	
Leaders	50
Erectors	33
Painters—	
Leaders	40
Painters	33
Cleaners	28
Ship fitters—	
Leaders	56
Fitters	48
Helpers	27
Linermen	27
Tool grinders	30
Tool keepers	25
Bolters—	
Leaders	43
Bolters	31
Chippers and calkers—	
Leaders	56
Chippers	35
Packers	25

Hull department—Continued.	Cents.
Yard laborers—	
Leaders	40
Laborers	28
Roofers	26
Janitors	24
Carters	27
Concreters	49
Storekeepers—	
Clerks	39
Tenders	33
Checkers	36
Receivers	33
Helpers	28
Chauffeur	28
Messengers	12
Iron and steel store—	
Checkers	38
Clerks	26
Handlers	28
Rivet store	26
Locomotive cranemen	40
Lumber yard—	
Inspector	40
Handlers	26
Drillers—	
Leaders	41
Drillers	31

Hull department—Continued.	Cents.
Riveters—	
Leaders	50
Riveters	35
Holders-on	30
Heaters	25
Passers	23
Ship riggers	42
Ship laborers—	
Leaders	34
Laborers	28
Cleaners	28
Handlers	28
Cementers	31
Yard riggers:	
Leaders	45
Riggers	38
Truckers	28
Locomotive cranemen	45
Crane tenders	38
Yard carpenters	36
Pattern shop:	
Leaders	57
Patternmakers	55
Apprentices	18
Helpers	23
Storekeepers	47
Machine hands	44
Joiners	39
Machine shop:	
Leaders	61
Machinists	43
Machine hands	38
Helpers	25
Handy men	30
Chippers	33
Babbiters	33
Riggers	30
Toolsmiths	35
Inspector	72
Toolkeeper	38
Apprentices	15
Die sinkers	32
Boiler shop:	
Leaders	53
Boiler makers	42
Fitters	36
Flangers	41
Chippers and calkers	42
Drillers	30
Riveters	45
Holders on	33
Handy men	30
Helpers	28
Heaters	25
Layers out	63
Acetelene burners	40
Light-iron works	38
Punchers	28
Tool keepers	33
Mold loft:	
Inspectors	42
Layers out	26
Engine installation department:	
Leaders	63
Machinists	42

Engine installation department—Continued.	Cents.
Handy men	32
Helpers	31
Carpenters	38
Tool keepers	32
Firemen	32
Apprentices	16
Light plate shop:	
Leaders	48
Tinsmiths	38
Light-iron workers	41
Layers out	44
Wire workers	43
Drillers	32
Chippers and calkers	41
Handy men	30
Helpers	28
Forge shop:	
Leaders	54
Blacksmiths	38
Anglesmiths	40
Drop forge	35
Rivet makers	40
Helpers	30
Blacksmith hands	29
Hammer drivers	26
Pipe shop:	
Leaders	60
Pipe fitters	39
Machinists	39
Plumbers	42
Handy mne	30
Helpers	30
Tool keepers	33
Chippers and calkers	45
Copper shop:	
Leaders	58
Coppersmiths	50
Pipe fitters	47
Testers	35
Galvanizers	29
Handy men	31
Helpers	29
Apprentices	19
Electricians:	
Leaders	45
Electricians	38
Machinists	41
Conduit workers	38
Wiremen	40
Helpers	25
Welders	46
Crane repairers	35
Apprentices	19
Drillers	33
Templet makers:	
Templet makers	51
Helpers	28
Apprentices	19
Messengers	21
Angle and plate shop:	
Leaders	53
Machine hands	36
Punchers	36
Planers	32

Angle and plate shop—Contd.	Cents.
Layers out	42
Furnace	31
Coal press	31
P. W. clerks	39
Checkers	30
Drillers	32
Chippers	35
Bolters	30
Assemblers	42
Riveters	39
Heaters	22
Handlers	32
Helpers	28
Shearmen	36
Toolkeepers	33
Acetylene burners	35
Crane followers	33
Joiner shop:	
Leaders	62
Joiners	36
Machine hands	44
Helpers	28
Saw filers	42

Joiner shop—Continued.	Cents.
Draftsmen	30
Apprentices	15
Timekeepers:	
Leaders	48
Timekeepers	33
Janitors	21
Counters	33
Clerks	18
Testers	39
Messengers	11
Surgeon	62
Yard clerks	25
Watchmen:	
Leaders	25
Watchmen	20
Crane operators	30
Power house:	
Engineers	33
Oilers	24
Firemen	30
Coal passers	24
Water tenders	33

It is assumed that this schedule is still in force at date of contract. Should any discrepancies develop corrections will be made accordingly.

C. A. S.
W. L. C.

SCHEDULE OF ITEMS OF OVERHEAD EXPENSE REFERRED TO IN SUBDIVISION (A) OF PARAGRAPH 3 OF ARTICLE XIX AND ARTICLE XX.

Administration salaries and expense.
Clerical and office salaries.
Supervision of productive work.
Technical supervision.
Technical and shop inspection.
Inspection and certificates of registration societies.
Insurance, fire, accident, marine, personal injury, liability, compensation, etc.
Protection, guards, etc.
Accounting.
Cost accounting.
Templet vessel.
Experimental work.
Expense of obtaining employees.
Transportation of laborers and employees.
Welfare.
Office rent and supplies.
Traveling expenses.
Postage, telephone, and telegraph.
Legal expense.
Subscriptions to technical publications.
Rental of real estate and office.
Clearing and care of yard and shop.
Purchase expense.
Templets.
Stores charges.
Laying out.
Drafting and listing.
Traffic chasing and routing.
Freight, expressage, and demurrage (not directly chargeable).
Light, heat, water, and power.
Temporary light and wiring (not directly chargeable).
Yard and shop service.
General supplies for yards and shops.
Tests and trials.
Repairs, maintenance, and renewal to plant.
Small and loose tool equipment charges.
Pattern lumber.
Royalties and patent rights.
All other items of expense not charged to material or labor cost of the vessel or the cost of the yard.

NOTE.—Overhead for accounting purposes may be divided into shop, indirect, and general overhead. Total, $255,000.

AMERICAN INTERNATIONAL CORPORATION.

[Transcript from records of executive committee, Sept. 13, 1917.]

The secretary presented to the meeting the terms of a contract between this corporation, as party of the first part, and the United States Shipping Board Emergency Fleet Corporation, as party of the second part, providing for the construction of standardized ships. On motion duly made and seconded, it was

Resolved, That the contract be, and the same hereby is, in all respects approved, ratified, and confirmed; and the president, or a vice president and secretary or treasurer, or assistant secretary or assistant treasurer of this corporation be, and they hereby are, authorized and directed to execute the same in the name and under the seal of this corporation, and any one of the directors of this corporation present at this meeting be, and is hereby, authorized and directed to countersign and deliver to the United States Shipping Board Emergency Fleet Corporation a duplicate of said contract; and the proper officers and agents of this corporation be, and they hereby are, authorized and directed to perform and carry out said contract; and the secretary of this corporation be, and is hereby, authorized and directed to file a duplicate of said contract among the records of this corporation; and the secretary of this corporation be, and is hereby, authorized and directed to certify under the seal of this corporation and deliver to said United States Shipping Board Emergency Fleet Corporation a true copy of this resolution.

STATE OF NEW YORK,
County of New York, ss:

Cecil Page, being duly sworn, deposes and says that he is secretary of the American International Corporation, a corporation organized and existing under and by virtue of the laws of the State of New York; that he has compared the foregoing resolution with the original thereof, duly adopted at a meeting of the executive committee of said corporation, duly called and held on the 13th day of September, 1917, and that the same is a true copy of said original and that a quorum was present at said meeting.

[SEAL.] CECIL PAGE.

Sworn to before me this 19th day of September, 1917.

[SEAL.] IRA C. RANSBURG,
Notary Public, Kings County.

[Contract No. 88 S. C. Fifty vessels, hull Nos. 492 to 541, inclusive. Option exercised 10/23/17 for 70 additional vessels, hull Nos. 669 to 738, inclusive.]

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, October 23, 1917.

AMERICAN INTERNATIONAL CORPORATION,
120 Broadway, New York City.

DEAR SIRS: The United States Shipping Board Emergency Fleet Corporation hereby exercises its option under Article XXI of the contract of September 13, 1917, between it and the American International Corporation to order, and does hereby order, seventy (70) vessels in addition to the fifty (50) covered by said contract, but of a different size and type from said first fifty (50) vessels. The said seventy (70) additional vessels are to be built under the terms of said contract of September 13, 1917, except as follows:

(1) Said seventy (70) additional vessels are to be fifteen-knot troop and cargo vessels of approximately eight thousand tons dead weight capacity, and are to be built in accordance with plans and specifications prepared and approved by the United States Shipping Board Emergency Fleet Corporation, a copy of which plans and specifications is attached hereto and hereby made a part hereof.

(2) The estimated basis cost of each of said seventy (70) additional vessels, exclusive of troop accommodations, is one million six hundred fifty thousand dollars ($1,650,000), and a schedule of such estimated basis cost is hereto attached and hereby made a part hereof.

(3) The amount of the normal fee to be paid the American International Corporation for the construction of said vessels, exclusive of troop accommodations, shall be eighty-two thousand five hundred dollars ($82,500) for each vessel, to which shall be added premiums at the rate of five hundred dollars ($500) per day for each and every day gained in the delivery of each vessel, and also sums on account of savings in cost as provided in said contract of September 13, 1917, and from which shall be subtracted liquidated damages at the rate of five hundred dollars ($500) per day for each and every day of delay in the delivery of each of said vessels, and also sums on account of overrun of cost as provided in said contract of September 13, 1917, provided that the total premium to be paid for each of said vessels on account of early delivery shall not exceed the sum of seventeen thousand five hundred dollars ($17,500)

for each vessel and that the total of liquidated damages and of all deductions shall in no case exceed the sum of seventeen thousand five hundred dollars ($17,500) for such of said vessels, so that the average minimum fee of the American International Corporation for the construction of said vessels, after subtracting all deductions and liquidated damages to be subtracted as provided in said contract of September 13, 1917, shall not be less than sixty-five thousand dollars ($65,000) for each of said seventy (70) additional vessels.

(4) The deliveries of said seventy (70) additional fifteen-knot vessels shall alternate with the deliveries of the fifty seventy-five-hundred-ton dead-weight capacity cargo vessels covered by said contract, as follows:

Twenty-five (25) of said seventy-five-hundred-ton type of cargo vessels are to be delivered in thirteen and one-half (13½) months from September 13, 1917.

Twenty-five (25) of the additional fifteen-knot eight-thousand-ton dead-weight capacity type hereby ordered are to be delivered within fifteen months from September 13, 1917.

Twenty-five (25) of said seventy-five-hundred-ton dead-weight capacity type are to be delivered within eighteen and one-half (18½) months from September 13, 1917.

Twenty-five (25) of said fifteen-knot eight-thousand-ton dead-weight capacity type are to be delivered within twenty (20) months from September 13, 1917.

Twenty (20) of said fifteen-knot eight-thousand-ton dead-weight capacity type are to be delivered within twenty-two (22) months from September 13, 1917.

The American International Corporation will, if the United States Shipping Board Emergency Fleet Corporation so requests, install on said vessels, troop accommodations upon the basis of said contract of September 13, 1917, the basis price and fee for such installation to be agreed upon at the time of such request.

It is agreed that this order of seventy (70) vessels of said fifteen-knot eight-thousand-ton type is equivalent to an order of one hundred (100) vessels of said seventy-five-hundred-ton type, and therefore fulfills the obligation on the part of the United States Shipping Board Emergency Fleet Corporation as set forth in Article XXI of the said contract of September 13, 1917, and thereby releases the said United States Shipping Board Emergency Fleet Corporation from its obligation to purchase the real estate from the agent.

Except as above provided, all the terms and provisions of said contract of September 13, 1917, shall apply to the construction of the seventy (70) additional vessels hereby ordered.

Please indicate your acceptance of this order at the bottom hereof.

Very truly, yours,

W. L. CAPPS, *General Manager.*

Accepted:

AMERICAN INTERNATIONAL CORPORATION,
By CHARLES A. STONE, *President.*

SUMMARY OF AMERICAN INTERNATIONAL CORPORATION.

[NOTE.—"Owner," Emergency Fleet Corp. "Agent," American International Corp. Contract 83 S. C. Sept. 13, 1917.]

NEW YORK CORPORATION.

OFFICE, NEW YORK CITY; PLANT, HOG ISLAND.

Work to be done.—(a) Fifty *cargo* vessels (Art. III, p. 2). 7,500 tons D. W. C. Owner's plans and specifications (p. 1).

(b) Seventy 15-knot *troop* and cargo vessels (herein called troop vessels), approximately 8,000 tons D. W. C. Owner's plans and specifications. Option (p. 1).

(c) Agent to construct plant and organize necessary force (Arts. I & II, p. 2).

(d) Agent will, if owner requests, install on vessels troop accommodations; price and fee for such installation to be agreed upon. Option (p. 2).

(e) Owner may use plant to install machinery in wood hulls or require agent to do so at terms to be fixed (Art. XXVIII, p. 24).

Deliveries.—Afloat shipyard at Hog Island, near Philadelphia (Art. III, p. 3), after dock trial, and if desired, sea trial for one of a group of vessels (Art. VIII, p. 8). Deliveries to be made on the following dates from the date of contract:

Cargo vessels: 25 within 13½ months; 25 within 18½ months.

Troop vessels: 25 within 15 months; 25 within 20 months; 20 within 22 months.

Purchase price.—Owner pays (a) cost of plant, not including real estate; (b) cost of vessels (Art. XVII, p. 12); (c) agent's fee (Art. XX, p. 17).

Actual cost.—Actual cost is defined (Art. XIX); it includes direct labor and materials and overhead.

(a) Plant cost is separated from vessel cost (Art. XVIII, p. 14), and overhead is prorated between them (Art. XIX, p. 17).

(b) Cost of vessels includes rent of real estate (Art. XIX, p. 15); maintenance and operation of shipyards (p. 15, top).

(c) No charge is made for executive salaries of agent (p. 16, top). If part of agent's force engaged on other work, overhead prorated (i. d.).

(d) Federal taxes borne by agent (p. 15, bottom).

Extra charges.—Borne by owner, but not included in actual or estimated cost. (1) Additional protection to plant (Art. XIII, p. 11). (2) Owner's inspectors (Art. VII, p. 7).

Estimated cost of vessel.—*Cargo* vessel, $1,100,000 each; *troop* vessel, $1,650,000 each; the estimated cost in each case is subject to increase or decrease as follows: (a) Wages varying from schedule (p. 18). (b) Material varying from schedule (i. d.). (c) Changes due to alterations (Art. III, p. 3). (d) Compliance with owner's instructions as to wages or conditions of labor (Art. XIII, p. 11). (e) Decrease if insurance dispensed with (Art. X, p. 10).

Fee—Cargo, 5 per cent; troop, 5 per cent.—(a) If actual cost equals estimated cost, $55,000 per cargo vessel; $82,500 per troop vessel.

(b) Fee increased: (1) If actual cost less than estimated, agent gets one-third of the savings. Owner and employees each one-third (Art. XX, p. 18). (2) Premiums for early delivery not exceeding $14,000 per *cargo* vessel (Art. IV, p. 4). $17,500 per *troop* vessel. Option (p. 1).

(c) Fee decreased: (1) If actual cost exceeds estimated cost one-half of excess is deducted (Art. XX, p. 18). (2) Losses caused by neglect of agent's executive or managers (Art. XIX (e), p. 16. (3) Liquidated damages for delay not exceeding $14,000 per *cargo* vessel (Art. IV, p. 4), or $17,500 per *troop* vessel. Option (p. 1). (4) These deductions not to reduce average minimum fee below $41,000 per *cargo* vessel (Art. XXV, p. 23), or $65,000 per *troop* vessel. Option (p. 2).

Plant.—(a) To consist of such buildings, building slips, camp, commissary hospital, plant, and appurtenances as may be necessary.

(b) Agent owns real estate (p. 1). (He agreed to acquire and has acquired the fee.)

(1) Owner has option to purchase real estate at $1,706, plus any further sum in excess of $110,000, which agent may be obligated to pay to the Commonwealth of Pennsylvania for a patent to part of the land plus assessments and taxes paid by agent for permanent improvements during contract period (Art. XXI, p. 21).

(2) Owner pays actual rent of $102,360 (6 per cent of cost) (Art. XIX, p. 15).

(c) All plant constructed belongs to owner (Art. I, p. 2).

(d) Owner limits plant cost to $21,191,096.

Payments.—(a) Of fee: $20,500 as each *cargo* vessel, and $32,500 as each *troop* vessel is half finished. $20,500 and $32,500, respectively, as each *cargo* vessel or *troop* vessel makes complete satisfactory trial (Art. XX, p. 18). Remainder, if any, upon audit of actual cost of each vessel (i. d.).

(b) Of cost: Owner from time to time provides funds to be deposited in trustee account, withdrawn against checks, countersigned by owner's representative. Agent gives bond secured by first mortgage on plant to insure proper application of funds (Art. XVII, p. 13). Rent of real estate and some outside costs are paid by owner monthly 15 days after submission of certified bills (Art. XVII, p. 14).

Premiums and liquidated damages.—Three hundred dollars per day per *cargo* vessel, and $500 per day per *troop* vessel, accordingly as delivery is advanced before or retarded beyond the schedule dates (Art. IV, p. 4). Option (p. 1). Extension of time granted because of conditions beyond agent's control extends period for computation of liquidated damages but (except where delay due to fitting out of wooden hulls) not for the computation of premium unless owner deems advisable (Art. IV, pp. 5, 6). Premiums or liquidated damages not to exceed $14,000 per *cargo* vessel (Art. IV, p. 4), or $17,500 per *troop* vessel (Option, p. 1).

Control over work, labor, subcontracts, and conduct of agent.—(a) Owner controls purchases and commitments; contracts are made in owner's name (Art. V, p. 6).

(b) Owner's instructions as to wages and conditions of labor are obeyed (Art. XII, p. 11).

(c) All directions, instructions, and decision of owner are to be followed (Art. XXVII, p. 24).

(d) Agent to subserve owner's interest at all times (Art. XXVI, p. 23).

Option.—(a) Additional vessels: Exercised as shown.

(b) On plant: (1) Owner has option to purchase at price stated above (*Plant* (b) (1). This option to be exercised after the making of an appraisal, making of which is to be commenced 60 days before completion of the work (p. 20). (2) If owner does not purchase, agent has option to purchase the buildings, etc., constructed, at appraisal value (p. 21).

(c) If neither agent nor owner exercises option, owner may remove property (pp. 21, 22).

Termination.—Owner has right to terminate if progress is unsatisfactory, in which case it may take over plant and facilities, pay agent actual cost of work done up to termination, plus fee which owner decides agent has earned, plus future rental (Art. XIX, p. 9).

Admiral BOWLES. Now, Mr. Chairman, I would like to give you the full record with reference to the requisitioning of vessels in private shipyards, and with your permission I would like to explain various things in connection with it and then submit the facts.

You will remember that the power to do this was contained in the act of Congress approved June 15——

Senator JONES. Admiral, before you go on with that, if we have any inquiries with reference to these other contracts don't you think we had better have them all together? It seems to me we ought to have a sample of one of these contracts where they took the contract on a cost-plus basis.

Admiral BOWLES. This analysis, Senator, will give you very full information about it, and that can be printed in the record, and the contracts are all at your service.

Senator JONES. I know, but we are making a record here that will be for the service of somebody else as well as us. Just as we have a sample of those contracts with agents, I would like to have in the record a sample contract of these other two classes in addition to this analysis.

Senator NELSON. We can let the Admiral pick out a sample of each and put it in the record.

The CHAIRMAN. Can you do that, Admiral? Can you pick out a sample of each?

Admiral BOWLES. I presume they are not all perhaps uniform even then.

Senator JONES. I suppose they are not absolutely uniform, but the general features are probably similar.

The CHAIRMAN. I will ask to have put in the record a sample of each of those contracts.

(The contracts referred to were subsequently furnished by Admiral Bowles and are here printed in full, as follows:)

[Specimen of actual cost plus guaranteed fee contract. Contract 47 W. H., July 21, 1917. This type of contract was an early one, this being the last of that type executed. Emergency Fleet Corporation is referred to herein as "Owner."]

SUMMARY OF PROVISIONS.—ALABAMA DRY DOCK & SHIPBUILDING CO. (ALABAMA CORPORATION), MOBILE, ALA.

Work to be done.—Two wood hulls. Owner's original drawings and specifications (p. 1, Art. I).

Deliveries.—Afloat contractor's works, Mobile, Ala. One hull eight months and one nine months after date of contract (p. 1, Art. I).

Purchase price.—Owner pays the cost and fixed fee (p. 1, bottom).

Cost.—Cost is defined in the contract, following, so far as applicable, the definition of cost in the munitions manufacturers tax law (p. 2, middle of page). The cost of the hull includes the amount which the owner authorized to be expended for plant construction or extension; this cost of plant construction or extension being thus charged to and spread over all of the hulls (p. 3, subsection g).

Fee.—Contractor receives a fixed fee, which is guaranteed to be $20,000 per hull (p. 2, top).

Premium and liquidated damages.—No provision.

Protection on labor and materials.—No provision. Owner pays all cost.

Plant.—Cost of construction of plant or of extensions to plant authorized by owner is included in and spread over the cost of hulls and is borne by owner (p. 3, subsection g). Plant so constructed or extensions so made belong to and continue to be property of owner, but may be purchased by contractor at termination of contract at an agreed valuation (p. 3, near bottom). Items of overhead expense, indirect expense, and plant cost must be submitted to owner in advance (p. 2, middle). Outside of contract, owner has imposed a reasonable limit upon amount to be expended for plant and extensions thereto.

Payments. (*a*) *Of items of cost.*—Monthly within 15 days after submission of bills (p. 5, top) and pay rolls certified to by owner's auditor covering approved cost for previous month (p. 5, top).

(*b*) *Of fee.*—$20 000 upon acceptance of each hull (p. 2, top).

Subcontracts and orders.—Owner has full control over orders and commitments for materials, equipment, and supplies. All such orders are placed by contractor as agent in the name of the owner. Contractor has no pecuniary liability thereunder where written approval of owner is obtained (p. 5, middle).

Other general provisions.—Provisions for determination of cost (p. 3, bottom); inspectors and auditors and accounts (pp. 4, 5); alterations (p. 5, Art. III); insurance (p. 6, Art. IV); forfeiture (p. 7, Art. V); title to work and materials (p. 8, Art. VI); settlement of disputes (p. 8, Art. VII); time of essence (p. 9, Art. VIII); liens (p. 9, Art. IX); compliance with instructions as to wages and conditions of employment (p. 10, Art. XI); prohibition against assignment (p. 10, Art. XII). Claims and patents (p. 9, Art. X).

[Contract No. 47, hull Nos. 332–333.]

CONTRACT FOR CONSTRUCTION OF STANDARD TYPE COMPLETE HULL—COST—PROFIT SHARING.

Contract made this 21st day of July, 1917, between Alabama Dry Dock & Shipbuilding Co., a corporation organized under the laws of the State of Alabama, party of the first part (herein called the contractor), and United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the owner).

For valuable considerations, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done.*—The contractor hereby agrees to construct, in accordance with the standard drawings and specifications of the owner (original) hereto attached and hereby made a part of this contract, under the rules and regulations of the American Bureau of Shipping, two (2) wood cargo-carrying hulls suitable for cargo-carrying steamers.

Deliveries.—The contractor agrees to deliver said hulls according to said drawings and specifications, to the owner, afloat at the works of the contractor at Mobile, Ala., as follows:

The first hull to be delivered on or before eight months from the date of this contract, and the second hull to be delivered on or before nine months from the date of this contract.

II. *Payment.*—In consideration of the performance of this agreement by the contractor, the owner agrees to pay therefor a lump sum estimated to be $300,000 for each such completed hull; such purchase price to be the actual cost of the work plus the contractor's profit as hereinafter provided.

The owner guarantees the contractor a profit of $20,000 on each completed hull, payable to the contractor when such hull is delivered to and accepted by the owner. The contractor agrees that the owner may withhold from said

purchase price of $300,000 per hull any amount over the actual cost of the work plus $20,000 (so that the contractor's profit on each hull shall be limited to $20,000).

The owner assumes no responsibility for inability to obtain or have delivered the plant or ways, or any part thereof.

Actual cost.—For the purposes of this contract, the actual cost shall be generally as defined in the United States revenue bill of September 8, 1916, section 302, in so far as the requirements of said revenue bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in paragraphs (*b*) to (*e*) of this article, and all items under paragraphs (*f*) and (*g*) shall, as far as possible, be submitted to the owner in advance for its approval, and no item so submitted in advance and disapproved by the owner shall be payable to the contractor:

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building or construction of the hulls, and other direct charges (such as insurance on the hulls).

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs and maintenance, light, heat, power, insurance (including liability and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property (account being taken of exceptional depreciation of extensions, increases, and additions to plant and property) specially acquired for or devoted to the manufacture or erection of the work or the construction of the hulls under this contract provided the same have not been paid for by the owner under (*g*).

(*g*) The cost of labor, materials, machinery, equipment, and supplies (other than real estate) for the establishment of and extensions, increases, and additions to plant and property of the contractor authorized by the owner specially acquired for or devoted to the building or construction of the hulls under this contract and rentals actually paid for such establishments, extensions, increases, and additions authorized by the owner.

Physical property and unexpired leases represented by items of cost included in paragraph (*g*) supra paid for by the owner shall continue to be the owner's property after termination of this contract, but may be purchased by the contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals as general manager of the owner, or his successors in such office (herein called "the general manager"), and his decision shall (except as hereinafter stated) be binding on both parties. Wherever possible, he will lay down in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the contractor. He will determine methods to be followed by the contractor in preparing bills and by engineers and auditors in certifying to them, and will determine the items which must be referred for his decision. He will, so far as possible, determine in advance the ratio of amortization referred to in paragraph (*f*) supra and allowances to be made for indirect charges.

Naval architect.—The owner will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these hulls. They and their assistants, described herein as the owner's inspectors, will represent the owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the owner will act as the representative of the owner and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the

owner shall be binding, subject in all cases to appeal to the general manager of the owner.

Auditors.—The owner may send an auditor to the work of the contractor to supervise and assist in the accounting.

The accounts and records of the contractor shall at all reasonable times be open to inspection by the owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the contractor in such form as may be required by the general manager. No change shall be required in the present methods and principles of keeping costs by the contractor, provided the general manager deems them adequate for the determination of actual costs. All information obtained from contractor's accounts and records shall be treated as confidential.

Time of payments.—Payments shall be made to the contractor by the owner monthly within 15 days after the submission of bills to cover the approved actual cost for the previous months, as defined under paragraphs (*a*) to (*e*), inclusive, and together with the additional approved actual cost, as defined under paragraphs (*f*) and (*g*).

No payment shall be made except when bills are certified by one of the owner's inspectors or an auditor. Final approval of all bills by such inspectors or auditors shall be necessary for payment.

Orders.—The owner shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of and extensions, increases, and additions to plants and property), and all contracts and orders placed by the contractor shall be in the name of the owner by the contractor as agent, and it is understood that the contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the owner.

Inspector's certificates.—Every facility shall be afforded by the contractor to the inspectors appointed by the owner. It shall be the duty of such inspectors, either personally or by deputies, to inspect all materials and workmanship entering into the construction and to accept such materials and (or) workmanship as are in conformity with specifications and promptly to reject all materials and all workmanship which do not comply with the specifications, such condemnation, if any, of materials to be made by such inspectors before the same are worked or put into construction if opportunity so to do is afforded by the contractor. Said inspectors shall also have the right of rejection after material is worked or put into construction if facilities are not given for inspection prior thereto.

III. *Alterations.*—The owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions not materially affecting the general design of the hull as the owner may deem necessary. The contractor agrees to accede to and carry the same into effect, as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, the dispute shall be determined as provided by Article VII hereof. If the contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the owner, or by reason of alterations or additions by the owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the contractor but not delivered, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the owner under Article XI hereof, or for any other reason beyond the control of the contractor, beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The contractor will during the progress of the work on said hulls and until delivery of them place and maintain insurance on each of them in proper amount by companies approved by the owner to cover work done and materials on hand for or appropriate to the use of the hulls in and about the premises of the contractor. Such insurance shall provide against fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the owner, not less than the sum of the payments made under this contract from time to time, provided

that the amount of insurance required shall not at any time exceed the amount available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the owner for the use of the owner and the contractor as interest may appear.

V. *Forfeiture.*—In case of failure or omission of the contractor at any stage of the work prior to completion from any cause or causes to go forward with the work and make progress toward its completion satisfactory to the owner, the owner may declare this contract forfeited. In that event the owner may immediately enter the works and premises of the contractor and take possession of the hulls and materials and equipment. The owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the hulls and of all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board the owner may proceed with the completion of the hulls in accordance with this contract either at the works of the contractor with its equipment, yard, and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the owner shall thus cause this contract to be forfeited, the amount to be paid hereunder shall be the actual cost (as defined in Art. II hereof), unless theretofore paid, plus a reasonable rental for the appliances, yards, and facilities of the contractor which, after said forfeiture, are used by the owner, not to exceed the agreed profit aforesaid.

Provided, however, That if the contractor can show to the satisfaction of the general manager of the owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which he had no control, the contrator shall be allowed such opportunity as the general manager of the owner may deem reasonable to complete the work within the time prescribed by this contract.

VI. *Title.*—It is agreed that as the payments provided for herein are made by the owner on account of materials ordered by or assembled or set up in the yard of the contractor or used in the construction hereunder, the same to the extent of the payments made shall become the property of the owner. Nothing contained herein, however, shall be construed as a waiver by the owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to the materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the general manager of the owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case after delivery of a completed hull to the owner under this contract (but only in that event) the contractor shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind and shall give notice to the owner to that effect within 30 days after delivery or after final payment by the owner, such matter shall be determined by a board, which shall consist of three naval architects or engineers or experts to be appointed—one by the owner, one by the contractor, and one by the American Bureau of Shipping. Such board shall within 30 days after submission of such matter to it determine what, if any, further sum shall be due by the owner to the contractor hereunder on account of such delivered hull, and its finding (made by a majority of the board) shall be conclusive on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essence of this contract. The contractor agrees to commence and carry through to completion the work under this contract with dispatch and that it will not enter into any other contract or undertake any other work or service at its yards which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. *Liens.*—The contractor shall keep the hulls in course of construction free and clear from all claims, liens, or any encumbrances of any kind or description and shall before delivery show to the satisfaction of the owner

that the hulls are free and clear from every claim, lien, and encumbrance except claim or lien of the contractor.

X. *Claims and patents.*—The contractor agrees to protect the owner from all claims arising from accidents or casualties to employees or workmen on or about the work covered by this contract and to indemnify the owner against the same.

The contractor shall be responsible for all claims, if any, made against the owner for any infringements of patents or patent rights and for the use of any patented articles and shall defend and save harmless and indemnify the owner against all such claims and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringement of patents or patent rights or of the use of any patented articles, provided that the owner will in all instances notify the contractor of any claims made against it by reason of any such infringement or use of patented articles at the time when such claim is made and will promptly notify the contractor of any suit or suits brought against it therefor and give the contractor an opportunity to defend the same, and provided that no payment shall be made by the owner unless with the consent of the contractor or pursuant to a decree by a proper court in such litigation, and provided that the contractor shall not be liable in the event the owner specifically orders the use of the patent or patented article whether or not the existence of the patent be known to the parties hereto.

XI. *Labor.*—The contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the owner.

XII. *Not assignable.*—This contract may not be assigned by the contractor without the consent of the owner in writing, provided, however, that nothing in this contract shall be construed as prohibiting the assignment of payments due or to become due to the contractor for the purpose of obtaining credit for furthering the construction hereby undertaken, but the owner may, by writing, make such prohibition.

XIII. Payments hereunder required to be made direct to the contractor shall be made by the owner by check addressed to the contractor by mail at Mobile, Ala.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

ALABAMA DRY DOCK & SHIPBUILDING CO.,
[SEAL.] By DAVID R. DUNLAP, *President.*
Attest:

_____ _____,
Secretary.

Countersigned:

_____ _____,
Director.

UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION,
[SEAL.] By WILLIAM DENMAN, *President.*
Attest:

GEO. H. SAVAGE,
Secretary.

SUMMARY OF PROVISIONS—UNION BRIDGE & CONSTRUCTION CO. (MISSOURI CORPORATION), MORGAN CITY, LA.

[Specimen of actual cost plus sliding-scale fee contracts. Contract 28, W. H., June 16, 1917. This type of contract was an early type, no contract of this kind except two having been executed since the middle of July, and as to those two the commitments had been made prior thereto. This form has been used for wood hulls only. Emergency Fleet Corporation is referred to as "owner."]

Work to be done.—Six wood hulls. Owner's standard drawings and specifications (p. 1, Art. I).

Deliveries.—Afloat contractor's works, Morgan City, La. One hull each following dates: February 15, March 30, May 10, June 20, July 30, September 10, 1918. (P. 1, Art. I.)

Purchase price.—Owner to pay actual cost plus a sliding-scale fee, which is increased or diminished as stated:

Cost.—Cost is defined in the contract following so far as applicable, the definition of cost in the munitions manufacturers' tax law (p. 3, subdiv. 5). The contract contains an estimated base cost which may vary according to (*a*) alterations directed by owner; (*b*) protection on labor and materials (see this heading below). The cost of the hull includes the amount which the owner authorized to be expended for plant construction or extension, this cost of plant, establishment, or extension being thus charged to and spread over all of the hulls (p. 4, subsec. (*g*)).

Fee.—The contractor receives a normal fee of $20,000 if the estimated cost equals the actual cost (p. 2, subdiv. 3).

(*a*) If the actual cost is less than the estimated cost, the fee is increased by one-half of the saving (p. 1, bottom).

(*b*) If the actual cost exceeds the estimated cost, the fee is decreased by the excess up to the amount of the normal fee (in other words, until the fee is wiped out) (p. 2, subsec. (*b*)).

(*c*) The owner bears any excess of the actual cost over the estimated cost plus contractor's normal fee (p. 2, subsec. (*b*)).

Premium and liquidated damages.—No provision.

Protection on labor and materials.—The base price of $280,000 is to be increased by any advance in the average actual cost of (*a*) lumber used in the construction of hulls over $35 per thousand f. o. b. mills (p. 2, subdiv. 4); (*b*) metal fastenings over 8 cents per pound base f. o. b. Morgan City, La. (ib.); (*c*) materials over the cost specified in schedule attached to the contract; (d) labor over the established schedule of wages prevailing in the vicinity of contractor on the date of the contract (pp. 2, 3); (*e*) owner bears the cost of any increases due to instructions of owner as to wages and conditions of labor (p. 11, Art. XI).

Plant.—The cost of the construction of plant or of extensions to plant authorized to owner is included in and spread over the cost of the hulls and is borne by the owner (p. 4, subsec. (*g*)). The plant so constructed or extensions so made, in the event that the actual cost exceeds the average sum of $300,000 for each hull, belongs to and continues to be the property of the owner, but may be purchased by the contractor at the termination of the contract at an agreed valuation (p. 4, subdiv. 6).

Outside of the contract the owner has imposed a reasonable limit upon the amount to be expended for plant and extensions thereto. Items of overhead expense, indirect expense, and plant cost must be submitted to the owner in advance (p. 3, subdiv. 5, second paragraph).

Payments—(*a*) *Of cost.*—Monthly within 15 days after submission of bills and pay rolls certified to by owner's auditor, covering approved cost for the previous month (p. 6, subdivs. 11, 12).

Subcontracts and orders—(*b*) *Of fee.*—Thirty days after acceptance of each hull (p. 2, subdiv. 3). Owner has full control over orders and commitments for material and equipment and supplies. All such orders are placed by contractor as agent in the name of the owner. Contractor has no pecuniary liability thereunder where written approval of owner obtained (p. 6, subdiv. 13).

Other general provisions.—Provision for determination of cost (p. 4, bottom). Inspectors, auditors, and accounts (p. 5, subdivs. 8, 9, 10; p. 6, subdiv. 14). Alterations (p. 7, Art. III). Delays beyond contractar's control (ib.). Insurance (p. 7, subdiv. 4). Forfeiture (p. 6, Art. V). Title to work and materials (p. 9, Art. VI). Disputes (p. 9, Art. VII). Time of essence (p. 10, Art. VIII). Liens (p. 10, Art. IX). Claims and patents (p. 10, Art. X). Probibition against assignment (p. 11, Art. XII).

Contract made this 16th day of June, 1917, between Union Bridge & Construction Co., a corporation organized under the laws of the State of Missouri, party of the first part (herein called the contractor), and the United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the owner).

For valuable considerations, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done.*—1. The contractor hereby agrees to construct, in accordance with the original standard drawings and specifications of the owner, hereto attached and hereby made a part of this contract, under the rules and regulations of the American Bureau of Shipping, six wood hulls suitable for cargo-carrying steamers.

Deliveries.—2. The contractor agrees to deliver said hulls to the owner afloat at the works of the contractor at Morgan City, La., as follows:

The first hull to be delivered on or before February 15, 1918, and the remaining number of hulls to be delivered as follows:

Second hull on or before March 30, 1918.

Third hull on or before May 10, 1918.

Fourth hull on or before June 20, 1918.

Fifth hull on or before July 30, 1918.

Sixth hull on or before September 10, 1918.

II. *Payment for hulls.*—1. The actual cost of each hull, as hereinafter defined, shall be paid by the parties as follows:

(*a*) The owner agrees to pay the first $280,000 of such actual cost or, upon the happening of either, any or all of the events specified in section 4 of this article, such additional sum as shall be determined pursuant to section 4 of this article. In the event such actual cost shall be less than $280,000, the owner shall pay to the contractor one-half of the difference between such actual cost and $280,000.

(*b*) In the event such actual cost shall exceed $280,000 or exceed such additional sum as shall be determined pursuant to section 4 of this article, the contractor shall pay such excess, except as specifically limited by section 2 of this article.

(*c*) Any excess of such actual cost over the amount required to be paid by the contractor, under subdivision (*b*) of this section 1, shall be paid by the owner.

Contractor's liability for cost.—2. It is agreed, however, that the total sum required to be paid by the contractor under subdivision (*b*) of section 1 of this article, shall in no event exceed the sum of $20,000 for each hull which the owner shall be required to accept delivery of under this contract. In the event the contractor shall wholly or partly default in the payments to be made by the contractor, under subdivision (*b*) of section 1 of this article, the owner may retain from the payment required to be made under section 3 of this article, as an offset against such default, an amount equal to the amount so in default, or if the amount so in default shall be equal to or in excess of the amount payable under said section 3 the owner may retain the whole of the latter amount.

Compensation—3. The owner shall pay to the contractor within thirty (30) days after the completion and delivery and acceptance of each hull a sum of $20,000 in full payment for the contractor's work and services hereunder.

Cost of material.—4. In the event there shall be any advance in the average actual cost of the lumber used in the construction of said hulls over the sum of $35 per thousand, f. o. b. mills, or in the event there shall be any advance in the average actual cost of the metal fastenings, shown on the blue print annexed hereto, marked Schedule A, and made a part of the specifications, used in construction of said hulls over the sum of 8 cents per pound base f. o. b. Morgan City, La., or in the event there shall be any advance in the average actual cost of labor employed in the construction of said hulls over the established schedule of wages prevailing in the vicinity of the contractor's yards on the date of this contract for similar services, or in the event there shall be any advance in the average actual cost of the materials specified in Schedule B annexed hereto over the prices set forth opposite said materials in said schedule, then in either, any, or all of said events, such advance plus the sum of $280,000 shall be the additional sum referred to in section 1 of this article.

Actual cost.—5. For the purposes of this contract the actual cost shall be generally as defined in the United States revenue bill of September 8, 1916, section 302, in so far as the requirements of said revenue bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in subdivisions (*b*) to (*c*) of this section 5, and all items under subdivisions (*f*) and (*g*) of this section 5 shall, as far as possible, be submitted to the owner in advance for its approval, and no item so submitted in advance and disapproved by the owner shall be payable to the contractor.

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building or construction of the hulls and other direct charges (such as insurance on the hulls).

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs and maintenance, light, heat, power, insurance (including lia-

bility and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans, contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property (account being taken of exceptional depreciation of extensions, increases, and additions to plant and property specially acquired for or devoted to the manufacture or erection of the work or the construction of the hulls under this contract provided the same have not been paid for by the owner under subdivision (*g*) of this section 5.

(*g*) The cost of labor, materials, machinery, equipment, and supplies (other than real estate) for the establishment of and extensions, increases, and additions to plant and property of the contractor authorized by the owner specially acquired for or devoted to the building or construction of the hulls under this contract and rentals actually paid for such establishments, extensions, increases, and additions authorized by the owner.

Title to plant.—6. Physical property and unexpired leases represented by items of cost included in subdivision (*g*) of section 5 of this article paid for by the owner shall, in the event the actual cost, as hereinbefore defined, shall exceed the average sum of $300,000 for each hull, belong to and continue to be the owner's property after termination of this contract, but may be purchased by the contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals as general manager of the owner or his successors in such office (herein called "the general manager"), and his decision shall (except as hereinafter stated) be binding upon both parties. Wherever possible, he will lay in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the contractor. He will determine methods to be followed by the contractor in preparing bills and by engineers and auditors in certifying to them, and will determine the items which must be referred for his decision. He will, so far as possible, determine in advance the ratio of amortization referred to in subdivision (*f*) of section 5 of this article and allowances to be made for indirect charges.

Naval architect.—8. The owner will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these hulls. They and their assistants, described herein as the owner's inspectors, will represent the owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the owner will act as the representative of the owner and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the owner shall be binding, subject in all cases to appeal to the general manager of the owner.

Auditors.—9. The owner may send an auditor to the works of the contractor to supervise and assist in the accounting.

10. The accounts and records of the contractor shall at all reasonable times be open to inspection by the owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the contractor in such form as may be required by the general manager. No change shall be required in the present methods and principles of keeping costs by the contractor provided the general manager deems them adequate for the determination of actual costs. All information obtained from the contractor's accounts and records shall be treated as confidential.

Payments.—11. Payments shall be made to the contractor by the owner monthly within 15 days after the submission of bills and pay rolls to cover the approved actual cost for the previous month, as defined in section 5 of this article, but in the event the contractor shall be in default, under subdivision (*b*) of section 1 of this article, the methods of making payments shall be submitted to and decided by the general manager and his decision shall be final.

12. No payment shall be made except when bills are certified by one of the owner's inspectors or an auditor. Final approval of all bills by such inspectors or auditors shall be necessary for payment.

Orders.—13. The owner shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of and extensions, increases, and additions to plants and property), and all contracts and orders placed by the contractor shall be in the name of the owner by the contractor as agent, and it is understood that the contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the owner.

Inspectors' certificates.—14. Every facility shall be afforded by the contractor to the inspectors appointed by the owner, and in the event the contractor shall order any material without the owner's approval, it shall be the duty of such inspectors either personally or by deputies to inspect such materials and to accept such materials as are in conformity with specifications and promptly to reject all materials which do not comply with specifications; such condemnation, if any, of such materials, to be made by such inspectors before the same are worked or put into the construction, if opportunity so to do is afforded by the contractor. Said inspectors shall also have the right of rejection after such materials are worked or put into construction, if facilities are not given for inspection prior thereto.

III. *Alterations.*—The owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions not materially affecting the general design of the hull as the owner may deem necessary. The contractor agrees to accede to and carry the same into effect as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. In the case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, the dispute shall be determined as provided by Article VII hereof. If the contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the owner, or by reason of alterations or additions by the owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the contractor but not delivered, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the owner under Article XI hereof, or any cause beyond the contractor's control, beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The contractor will, during the progress of the work on said hulls and until delivery of them, place and maintain insurance on each of them in proper amount by companies approved by the owner to cover work done and materials on hand or appropriate to the use of the hulls in and about the premises of the contractor. Such insurance shall provide against fire and marine risks, lightning, settling of stagging, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the owner, not less than the sum of the payments made under this contract from time to time, provided that the amount of insurance required shall not at any time exceed the amount available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the owner for the use of the owner and the contractor as interest may appear.

V. *Forfeiture.*—In case of failure or omission of the contractor at any stage of the work prior to completion from any cause or causes to go forward with the work, and make progress toward its completion satisfactory to the owner, the owner may declare this contract forfeited. In that event the owner may immediately enter the works and premises of the contractor and take possession of the hulls and materials and equipment. The owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the hulls and of all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board, the owner may proceed with the completion of the hulls in accordance with this contract either at the works of the contractor with its equipment, yard, and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the owner

shall thus cause this contract to be forfeited the amount to be paid hereunder shall be the actual cost (as defined in Article II hereof), unless theretofore paid, plus a reasonable rental for the appliances, yards, and facilities of the contractor, which, after said forfeiture, are used by the owner not to exceed the amount payable to the contractor under Article II hereof. Provided, however, that if the contractor can show to the satisfaction of the general manager of the owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which he had no control, the contractor shall be allowed such opportunity as the general manager of the owner may deem reasonable to complete the work within the time prescribed by this contract.

VI. *Title.*—It is agreed that as the payments, provided for herein, are made by the owner on account of materials in the hulls ordered by or assembled or set up in the yard of the contractor or used in the construction of the hulls hereunder, exclusive of the construction of the plant and ways, the same to the extent of the payments shall become the property of the owner. Nothing contained herein, however, shall be construed as a waiver by the owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the general manager of the owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case after delivery of a completed hull to the owner under this contract (but only in that event) the contractor shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind, and shall give notice to the owner to that effect within 30 days after delivery or after final payment by the owner, such matter shall be determined by a board which shall consist of three naval architects or engineers or experts to be appointed, one by the owner, one by the contractor, and one by the American Bureau of Shipping. Such board shall within 30 days after submission of such matter to it determine what if any further sum shall be due by the owner to the contractor hereunder on account of such delivered hull and its finding (made by a majority of the board) shall be conclusive on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essense of this contract. The contractor agrees to commence and carry through to completion the work under this contract with dispatch, and that it will not enter into any other contract or undertake any other work or service at its yards which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. *Liens.*—The contractor shall keep the hulls in course of construction free and clear from all claims, liens, or any encumbrances of any kind or description, and shall before delivery, show to the satisfaction of the owner that the hulls are free and clear from every claim, lien, and encumbrance, except claim or lien of the contractor.

X. *Claims and patents.*—The contractor shall be responsible for all claims, if any, made against the owner for any infringements of patents, or patent rights and for the use of any patented articles and shall defend and save harmless and indemnify the owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of such infringement of patent or patent rights, or of the use of any patented articles, provided, that the owner will, in all instances, notify the contractor of any claims made against it by reason of any such infringement or use of patented articles, at the time when such claims is made, and will promptly notify the contractor of any suit or suits brought against it therefor and give the contractor an opportunity to defend the same, and provided that no payment shall be made by the owner unless with the consent of the contractor or pursuant to a decree by a proper court in such litigation, and provided that the contractor shall not be liable in the event the owner specifically orders the use of the

patent or patented article, whether or not the existence of the patent be known to the parties hereto.

XI. *Labor.*—The contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the owner. If by reason of any such instruction, the cost of any hull hereunder shall be increased, then the sums to be paid by the owner to the contractor as herein provided for such hull shall be increased by such amount. Such amount shall be agreed upon by the parties, and, if not agreed upon, shall be determined as provided in Article VII hereof.

XII. *Not assignable.*—This contract shall not, nor shall any interest herein, be transferred by the contractor to any person or persons save with the consent of the owner in writing.

XIII. Payments hereunder required to be made direct to the contractor shall be made by the owner by check addressed to the contractor by mail at 903 Sharp Building, Kansas City, Mo.

In witness whereof the parties have caused these presents to be executed by their proper corporate officer and their corporate seals to be hereto affixed and attached on the day above stated.

UNION BRIDGE AND CONSTRUCTION CO.,
[SEAL.] By L. S. STEWART, *President.*

Attest:
H. C. BECK, *Secretary.*
Countersigned:
C. A. NEAL, *Director.*

UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION,
[SEAL.] By WILLIAM DENMAN, *President.*

Attest:
GEO. H. SAVAGE, *Secretary.*

SCHEDULE B.

This schedule is subject to approval of owner's representative, R. E. Wood.

The Union Bridge & Construction Co., the contractor named in the annexed contract, will furnish, from time to time, the owner with schedules of material for the construction of hulls which the owner agrees, as provided in section 4 of Article II of the annexed contract, to cause to be furnished as soon as practicable after the dates to be stated by the contractor.

The description of the material and the prices therefor, f. o. b. New Orleans, La., are as follows:

STEEL PIPE.

	Price per 100 feet.			Price per 100 feet.	
	Black.	Galvanized.		Black.	Galvanized.
¼-inch	$3.78	$5.40	2-inch	$20.72	$25 90
⅜-inch	3.78	5.40	3-inch	47 84	53 55
½-inch	5.02	6.29	4-inch	70.85	85 02
¾-inch	6.44	8.05	5-inch	96.20	115 40
1-inch	9.52	11.90	6-inch	124.90	149 80
1¼-inch	15.40	19.25	7-inch	161.80	195.20

NATURAL-WOOD KNEES.

		Price.
12 inches thick, 3 feet and up by 6 feet and up (Douglas fir)	each	$16.50
9 inches thick, 3 feet and up by 3 feet and up (Douglas fir)	do	11.75
8 inches thick, 2 to 6 inches and up by 3 feet and up (Douglas fir)	do	10.00
6 inches thick, 2 to 6 inches and up by 3 feet and up Hackmatack	do	6.75
4 inches thick, 2 feet and up by 2 feet and up, Hackmatack	do	3.40

TREENAILS (BLACK LOCUST OR WHITE OAK).

		Price.
1¼ inches diameter by 26 inches long	per M	$78.00
1⅜ inches diameter by 32 inches long	do	115.00
1⅜ inches diameter by 36 inches long	do	125.00

DECK PLUGS.

Up to ¾ inch	per M	$0.95
Up to 1 inch	do	1.00
Up to 1¼ inches	do	1.30
Up to 1½ inches	do	1.40

MISCELLANEOUS.

Tarr & Wonson, copper paint, brown	per gallon	$2.20
Marine Patrol, gray hull paint (for hulls and exterior all superstructure	do	2.00
Inside gray hull paint	do	2.00
"Gulf and Marine" outside white	do	2.25
"Gulf and Marine" inside white	do	2.25
"Gulf and Marine" grays, reds, yellows, browns	do	2.25
"Gulf and Marine" greens and vermillions	do	2.75
Moore's marine spar varnish	do	3.00
Moore's light hard oil varnish	do	2.40
Crockett's marine spar varnish	do	4.75
Valentine's valspar varnish	do	4.75
H. W. Johns's smokestack paints	do	2.10
Strictly pure white lead in oil	per pound	.13½
Strictly pure red lead in *oil*, dry	do	.13½
Strictly pure red lead in oil	do	.13½
Raw linseed	per gallon	1.30
Turpentine	do	.52
Carbolineum	do	.45
Navy pitch	per barrel of 200 pounds	4.50
Sheet lead	per pound	.14½
Brass castings	do	.36½
Forgings	do	.10
Calking cotton	do	.23
Oakum (Stratford)	per bale of 50 pounds	9.00

[Summary of provisions, lump-sum contract. Contract 144 S. C. Dec. 4, 1917. This is the present form of lump-sum contract. There are slight modifications to meet different situations. Emergency Fleet Corporation is referred to as "owner."]

PENSACOLA SHIPBUILDING CO. (DELAWARE CORPORATION); OFFICE, CHICAGO, ILL.; PLANT, PENSACOLA, FLA.

Work to be done.—(*a*) Ten fabricated steel turbine-driven vessels, 9,000 tons dead-weight cargo, 11 knots speed at deep-load draft (p. 1, Art. I). (*b*) Construct, equip, and maintain suitable shipyard plant, to be substantially completed in 200 days (p. 1, Art. I, subdiv. 1).

Deliveries.—Afloat contractor's works. One vessel within 12 months from date of contract, one each month thereafter (p. 1, Art. I). Before acceptance, vessel to undergo a dock trial and (or) a sea trial (p. 4, subdiv. 7).

Purchase price.—Lump sum $1,458,000 per vessel (p. 2, Art. II, subdiv. 1). Subject to following variations: (*a*) Increase or decrease in cost owing to alterations directed by owner (p. 6, Art. III, subdiv. 1). (*b*) Any savings due to owner waiving the carrying of insurance (p. 7, top of page). (*c*) Increase due to owner's instructions as to the conditions of labor (p. 10, Art. XI). (*d*) Increases in wages approved by owner (p. 12, Art. XVIII). (*e*) Any saving made by the owner in buying engines, turbines, boilers, auxiliaries, and deck machinery under the prices submitted by the contractor (p. 5, subdiv. 9). (*f*) Any deductions made at the rate of $162 per ton to cover the difference between the actual dead-weight tonnage and the contracted dead-weight tonnage of 9,000 tons (p. 5, subdiv. 10). (*g*) Any increase or decrease due to the difference between the actual and estimated cost of steel furnished by the owner (p. 2, 2d par.; p. 3, subdiv. 2). (*h*) Premium for expedition; liquidated damages for delay.

Furnishing of materials.—(*a*) Owner agrees to furnish f. o. b. mill to the contractor certain steel material estimated to cost $210,000 per vessel (p. 2, 2d par.). In computing the final payment, the actual cost of the steel is taken into consideration (p. 3, subdiv. 2). (*b*) Contractor estimates the cost of engines, boilers, auxiliaries, and deck machinery at the price as stated in schedule C, but makes no commitments without the written approval of the owner. Owner has option to furnish such equipment and, if it can do so at a lower price, is entitled to saving (p. 5, subdiv. 9).

Payments.—After deducting $210,000 per vessel (estimated cost of hull), balance of lump-sum purchase price is paid as follows: (*a*) Ten per cent of contract price of all steamers 30 days after signing contract (p. 2, middle). This payment is deposited in trustee account, withdrawable only on checks countersigned by owner's representative. Money so deposited is to be used (except a part thereof not exceeding one-half, which may be used in the construction of plant) for labor and material entering into the construction and equipment of vessels, including a proper proportion of overhead expenses incurred in connection with construction (p. 3, subdiv. 4). (*b*) Subsequent payments are made as different stages in the progress of work are reached (pp. 2, 3). Such payments do not exceed the value of materials and labor and overhead in connection with construction of the particular vessel plus one-tenth of the amount paid out of the first payment for plant (p. 3, subdiv. 3; p. 4, subdiv. 6).

Final payment.—The final payment is made upon acceptance by the owner after trial (p. 3, subsec. 1).

Plant.—(*a*) Contractor may expend up to one-half of first payment (approximately $625,000) upon plant (p. 3, subdiv. 4). (*b*) To secure proper application of these funds they are placed in the trustee account (p. 3, subdiv. 4) and in addition contractor gives its bond for $625,000, secured by a first mortgage upon contractor's plant, to insure proper application of funds (p. 4, subdiv. 5).

Premium and liquidated damages.—Three hundred dollars a day, according as delivery is advanced or retarded, not to exceed $25,000 per vessel (p. 8, Art. VIII, 2d par.).

Forfeiture.—If the progress of the work is unsatisfactory, owner may declare contract forfeited, take over plant and facilities of contractor, and complete the vessels with such plant and facilities or otherwise (p. 7, Art. V).

Cancellation.—If progress of the work is unsatisfactory, owner may cancel and contractor will complete only such vessels as directed (p. 11, Art. XVII). Contractor shall be reimbursed for losses sustained by cancellation, but in computing such losses shall be given consideration for profits only to the extent of the work constructed or under construction (ib.).

Insolvency.—If the contractor becomes insolvert, etc., owner may take possession of and complete the work (p. 11, Art. XIV).

Other general clauses.—The contract contains clauses for inspection (p. 4, subdiv. 8); access by inspectors and auditors (p. 5, subdiv. 11); alterations (p. 6, subdiv. 1); delays beyond control of contractor (p. 6, subdiv. 2); insurance (p. 6, Art. IV); title to work in vessels (p. 7, Art. VI); settlement of disputes (p. 7, Art. VII); time of essence—work under contract to be given precedence (p. 8, Art. VIII); provisions covering liens and taxes (p. 8, Art. IX); claims and patents (p. 9, Art. X); prohibition against assignment (p. 10, Art. XII); subcontracts made assignable to owner (ib.); Members of Congress not to benefit (p. 10, Art. XIII); laborers and material men's bonds to be furnished (p. 11, Art. XV); contractor to obtain necessary permits (p. 11, Art. XVI); personnel of contractor to be satisfactory to owner (p. 12, Art. XIX).

[Contract No. 144 S. C. Hull Nos. 965-974, inclusive.]

CONTRACT (LUMP-SUM BASIS) FOR COMPLETE VESSEL—STEEL FURNISHED.

Contract made this 4th day of December, 1917, between Pensacola Shipbuilding Co., a corporation organized under the laws of the State of Delaware, party of the first part (herein called the contractor), and the United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia (herein called the owner), representing the United States of America, party of the second part.

For a valuable consideration, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Shipyard.*—1. The contractor agrees to construct, equip, and maintain, upon a suitable site, a shipbuilding plant, including office buildings, shops, building slips, plant equipment, and appurtenances, including arrangements for adequate fire protection and adequate housing facilities for contractor's employees adequate to assure the construction, completion, and delivery of the vessels under the terms and at the times herein provided, said plant to be substantially completed in 200 days.

Work.—2. The contractor hereby agrees to construct at its own expense, in accordance with the contractor's drawings and specifications (all drawings and specifications before binding on the owner must bear the acceptance of and approval by the owner or its duly authorized representative), hereto attached and made a part of this contract, under the rules and regulations of the American Bureau of Shipping, and/or Lloyds, 10 fabricated steel, turbine-driven vessels of 9,000 tons dead-weight carrying capacity each and 11 knots speed at deep-load draft.

The contractor agrees to deliver said vessels complete with propelling machinery, auxiliaries, and equipment, with full military requirements, according to said drawings and specifications, to the owner afloat at the works of the contractor at Pensacola, Fla., as follows:

One vessel within 12 months from the date of this contract.
One vessel within 13 months from the date of this contract.
One vessel within 14 months from the date of this contract.
One vessel within 15 months from the date of this contract.
One vessel within 16 months from the date of this contract.
One vessel within 17 months from the date of this contract.
One vessel within 18 months from the date of this contract.
One vessel within 19 months from the date of this contract.
One vessel within 20 months from the date of this contract.
One vessel within 21 months from the date of this contract.

II. *Payment.*—1. In consideration of the performance of this agreement by the contractor the owner agrees to pay therefor a lump-sum purchase price of $1,458,000 for each of such completed vessels. Such purchase price shall be paid in the following manner:

Steel furnished.—The owner agrees to cause to be furnished f. o. b. the mill to the contractor certain steel material, which shall be ordered by the contractor, at the price (freight to contractor's yard to be paid by the contractor), and in amounts and at the times substantially as shown in schedule B, hereto attached, which is made a part hereof. Such steel shall be ordered by the contractor for the owner's account, and payment therefor at the price shown in schedule B shall be made by the owner direct to the concern furnishing such steel. All payments so made shall be deemed payments on account of the purchase price above stated. For the purpose of computing the amounts to be paid by the owner direct to the contractor the cost of such steel is figured approximately at $210,000 for each vessel. The balance of the purchase price is to be paid direct to the contractor as follows:

(*a*) Ten per cent of the contract price of all said steamers 30 days after signing this contract.

(*b*) Ten per cent of the contract price of each vessel when the keel thereof is laid, or its equivalent in work done.

(*c*) Five per cent of the contract price of each vessel when 50 per cent of the floors are in place, or its equivalent in work done.

(*d*) Five per cent of the contract price of each vessel when 50 per cent of the tank top is in place, or its equivalent in work done.

(*e*) Five per cent of the contract price of each vessel when one-half the frames thereof are in place, or its equivalent in work done.

(*f*) Five per cent of the contract price of each vessel when all the frames thereof are in place and stem and stern posts are up, or its equivalent in work done.

(*g*) Ten per cent of the contract price of each vessel when one-half of the plating is bolted in place, or its equivalent in work done.

(*h*) Ten per cent of the contract price of each vessel when bulkheads and decks are in place, or its equivalent in work done.

(*i*) Ten per cent of the contract price of each vessel when said vessel is fully plated and the decks and the outside of the vessels are entirely calked, or its equivalent in work done.

(*j*) Ten per cent of the contract price of each vessel when said vessel is successfully launched, or its equivalent in work done.

(*k*) Ten per cent of the contract price of each vessel when steel houses are completed and machinery, boilers, auxiliaries, [illegible] equipment, [illegible] or its equivalent in work done.

(*l*) The balance of the contract price of each vessel after completion and steam trial and on delivery to and acceptance by the owner of such completed vessel.

2. In computing the percentage thus to be paid of the purchase price of each vessel under subdivisions (*a*) to (*k*) inclusive, the purchase price shall be deemed to be the aforesaid lump-sum purchase price minus the aforesaid estimated cost of steel to be supplied by the owner as above stated. In computing the balance due under subdivision (*l*) the actual and not the estimated cost of steel shall be used.

3. Work done as used in the preceding paragraphs shall mean and represent the actual value of material delivered at the works of the contractor, inspected and passed by the owner, or the duly authorized representative of the owner, and the actual value of all labor expended on the vessel or vessels, together with a proper proportion of the operating and overhead expense incurred only on account of the vessels herein contracted for, and cash payments, if any, for hull material fabricated at the works of a subcontractor, and/or for propelling machinery, boilers, and auxiliaries, and the amount spent upon contractor's ways, shipbuilding plant, and yard equipment—all as approved by the duly authorized representatives of the owner. In estimating progress payments (*b*) to (*k*) both inclusive, due the contractor upon each vessel, only 10 per cent of the total amount spent upon contractor's ways, shipbuilding plant, and yard equipment (as provided for in par. 4 of this article) shall be allowed against each vessel.

4. The payment described in subdivision "*a*" of section 1 of Article II hereof shall be deposited in the name of the owner, with a depositary or depositaries designated by the contractor and approved by the owner. The money so deposited shall be withdrawn and used only in payment for material delivered at the works of the contractor, inspected and passed by the owner or the duly authorized representative of the owner, and for labor expended on the vessel or vessels and for a proper proportion of the operating and overhead expenses incurred only on account of the vessels herein contracted for, and the cash payments, if any, for hull material fabricated at the works of a subcontractor, and/or for propelling machinery, boilers, and auxiliaries—all as approved by the duly authorized representative of the owner, except that a part thereof not exceeding one-half of said payment may be used for the contractor's ways, shipbuilding plant, and yard equipment. Such withdrawals shall be made only upon checks or drafts drawn by the contractor and countersigned by the duly authorized representative of the owner. Such checks or drafts will be countersigned only upon receipt of and in accordance with vouchers for material and/or labor and/or operating and overhead expenses, and/or cash payments as provided for in the preceding paragraph which have been signed by the contractor and approved in form and substance by the duly authorized representative of the owner. The title to such deposit and interest thereon shall be and remain in the owner until withdrawn as aforesaid.

In the event of any default of the contractor hereunder, the owner upon its notice to the depositary or depositaries of such default shall have the right to withdraw upon its sole order the said deposit or any part thereof.

Bonds to be furnished by the contractor.—5. Before any part of the payment provided for in subdivision (*a*) of section 1, Article II, can be spent on contractor's ways, shipbuilding plant, and yard equipment, the contractor agrees to furnish the owner its bond in the sum of $625,000, secured by a first mortgage upon the contractor's real estate located at Pensacola, Fla., and the improvements now and hereafter located thereon, including all tools and engineering equipment. The contractor further agrees to furnish the owner a policy of title insurance in an amount equal to the purchase price of the contractor's real estate at Pensacola, Fla., in a title company or companies satisfactory to the owner. The bond aforesaid shall secure to the owner the proper application of the sum of $625,000 upon the contractor's ways, shipbuilding plant, and yard equipment, and the construction of contractor's shipbuilding plant as provided by paragraph 1 of Article I. The cost of the policy of title insurance and all costs and expenses in connection with the preparation, execution, and recordation of the bond and mortgage shall be paid for by the contractor.

Payments represented by progress.—6. It is agreed that as to all the installment payments provided for in section 1 of this article, after the first payment

described in subdivision "a" of section 1, no payment made shall with the payments theretofore made exceed the value of the materials and labor already expended up to that time, together with the proper proportion of the operating and overhead expenses and cash paid out, and the amount spent upon contractor's ways, shipbuilding plant, and yard equipment, all as provided in sections 3 and 4 of this article, and all of which is certified to by the owner's inspector and is accepted as satisfactory by the owner.

Trial.—7. Before final acceptance of each vessel by the owner the contractor shall make, at contractor's expense, a dock trial of not exceeding six hours, and/or a sea trial at some point convenient to the contractor's yard of not exceeding four hours at maximum specified speed and deep-load draft, which shall be to the satisfaction of the owner. If the vessel is tried at deep-load draft the owner will provide cargo. If so desired, the owner can require all or any of the vessels to be tried at a lesser draft and increased speed corresponding thereto as determined by the owner.

Inspector's certificate.—8. No inspector's certificate given or payment made under the terms of this contract (except the final payment) shall be conclusive evidence of the performance of this contract, either in whole or in part, and no payment shall be construed to be an acceptance of defective work or improper materials. Every facility shall be afforded by the contractor to the inspectors appointed by the owner. It shall be the right and duty of such inspectors, either personally or by deputies, to inspect all materials and workmanship entering into the construction, and to accept such materials and/or workmanship as are in conformity with specifications, and promptly to reject all materials and/or workmanship which do not comply with the specifications; such condemnation, if any, of materials to be made by such inspectors whenever defects are discovered prior to the final acceptance of the vessel by the owner. Notice of rejection shall be in writing, signed by a designated representative of the owner.

Covenants regarding equipment and material.—9. The contractor, in estimating the above lump-sum purchase price, has estimated the main engines, boilers, auxiliaries, and deck machinery required for the construction of the vessels at the current market price stated in schedule C. The contractor agrees not to make any commitments with respect to any of the aforesaid main engines, or turbines, boilers, auxiliaries, and deck machinery, without the written approval of the owner, and that in the event the owner shall be able to purchase the same for any sum less than the prices stated in schedule C the owner shall be entitled to such saving; and further agrees that the owner may purchase and deliver the same to the contractor and withhold the price thereof stated in schedule C from the payments (which in the ordinary course of events would be due upon the use of such items) required to be made by the owner to the contractor under section 2 of this article.

10. The owner shall make a deduction at the rate of $162 per ton (or any part thereof) to cover the difference between the actual dead-weight tonnage and the contracted dead-weight tonnage of 9,000 tons, provided that no deduction shall be made for deficiency due to changes or alterations in the vessels, or any of them, made pursuant to the owners' instructions.

The actual tonnage of each vessel shall be determined by her ability to carry a dead-weight of 9,000 tons, including cargo, fuel, stores, water, crew, and effects on a draft with summer freeboard, as determined by the British board of trade rules, as shown by a displacement and dead-weight scale to be furnished by the contractor, checked and approved by the owner. The amount of deductions for such tonnage deficiency, when determined, shall be deducted from the balance of the contract price due the contractor under subdivision (1). The vessel contracted for includes full military extras, but the weight of said military extras and the net effect of changes ordered by the owner shall be allowed for as if it were dead-weight.

Inspectors and auditors.—11. The owner's inspectors, auditors, or other duly authorized representatives shall have full and free access to the works of the contractor and to all work and material and all accounts, records, and original entries, vouchers, and supporting papers of the contractor. In order that the owner may keep in touch with the progress and cost of the construction of the vessels, the contractor shall keep its books in such a way as to disclose readily and accurately all information necessary to determine costs, expenses, and charges in connection with the construction of the vessels hereunder.

III. *Alterations.*—1. The owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substi-

tutions not materially affecting the general design of the vessel as the owner may deem necessary. The contractor agrees to accede to and carry the same into effect upon proper compensation or allowance being agreed therefor, as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. If by reason thereof the cost of the construction hereunder shall be increased, then the sum to be paid by the owner to the contractor, as herein provided, shall be increased to an amount which shall be agreed upon. If the construction shall be rendered less expensive by reason thereof, the sum to be paid shall be decreased by an amount which shall be agreed upon. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, or the price thereof, the dispute shall be determined as provided by Article VII hereof.

Delay.—2. If the contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the owner, or by reason of alterations or additions by the owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the contractor but not delivered, or by reason of strikes, fires, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by delay or failure of manufacturers to deliver material or machinery which the owner agrees to cause to be furnished to the contractor, pursuant to section 8 of Article II hereof, or by reason of instructions given by the owner under Article XI hereof, beyond the time herein fixed the time of delivery shall be extended for a period equivalent to the time lost by reason thereof: *Provided*, That on request for extension of the contract time shall be considered unless the contractor, within 10 days from the occurrence of an alleged cause of delay, shall notify the general manager of the owner, in writing, of the facts and circumstances in each case and of the extent to which the contractor claims that the completion of the vessel is thereby delayed: *And provided further*, That the owner may, without prejudice to the rights of the contractor, reserve his decision upon any and all claims for extension until the completion of the vessel, the work in the meantime not to be discontinued or delayed on account thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The contractor agrees to insure and keep insured at its own expense for the benefit of the owner in insurance companies satisfactory to the owner, or otherwise, said vessels and all materials and supplies for and to be used in construction under this contract against any and all damage by fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching during such construction and until final completion and delivery to and acceptance by the owner; such insurance to be in the usual form and to be payable to the owner and the contractor as their interests may appear, and for an amount not less than the amounts of the installments of payment, which, from time to time have been made: *Provided*, That the amount of insurance required shall not exceed at any time the amount available in the insurance market, and that before placing the same the owner has the option of waiving any insurance and reducing the contract price by an amount corresponding to the cost of said insurance.

V. *Forfeiture.*—The progress of the work must at all times be satisfactory to the owner. Upon any failure or omission of the contractor to make such satisfactory progress (unless caused by circumstances beyond its control) the owner may declare this contract forfeited. In that event the owner may immediately enter the shipyard and take possession of it and its facilities and of the vessels and materials and equipment. The owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the vessels and of all materials on hand applicable thereto, the owner may proceed with the completion of the vessels in accordance with this contract either at the shipyard with its equipment, and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory.

Provided, however, That if the contractor can show to the satisfaction of the general manager of the owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which it had no control, the contractor shall be allowed such opportunity as the general manager of the owner may deem reasonable to complete the work.

VI. *Title.*—It is agreed that title to all vessels, either completed or under construction, in so far as they shall have been inspected and approved by the owner, shall be in the United States of America, and that the title for all material for the furtherance of work under this contract, however and by whomsoever contracted for or assembled or set up in the shipyard or used in the construction of the work under this contract, shall be in the owner at all times. Nothing contained herein, however, shall be construed as a waiver by the owner of its right to direct the replacement of unsatisfactory workmanship and/or materials.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided for hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by Washington L. Capps, the general manager of the owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case, after delivery of a completed vessel to the owner under this contract (but only in that event), the contractor shall deem that it is aggrieved by any decision of the general manager, as to any disputed matter hereunder of any kind, and shall give notice in writing to the owner to that effect within 60 days after delivery or after final payment by the owner, such matter shall be determined by a board which shall consist of three naval architects or engineers, or experts to be appointed, one by the owner, one by the contractor, and the third arbitrator shall be selected by the two arbitrators first chosen, and if they can not agree on such third arbitrator, then the latter shall be named by the classification society under which the vessels are being constructed. Such board shall within 30 days after submission of such matter to it, make its determination and its findings (made by a majority of the board) shall be conclusive and binding on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essence of this contract. The contractor will commence and carry through to completion the work under this contract with all possible dispatch, will give precedence in its plant or plants to the work hereunder subject only to the prior rights, if any, of a department of the United States of America, and will not enter into any other contract or undertake any work or service at its works which will interfere in any material manner with the completion of the work undertaken hereunder.

Bonus and liquidated damages.—Should the contractor succeed in delivering any of said vessels to the owner complete before the dates above provided, the owner agrees to pay, as premium for advanced delivery for each completed vessel so delivered, the sum of $300 per day for each and every day gained by such advanced delivery. Should the contractor fail to deliver any of said vessels on the dates herein fixed, the contractor agrees to pay the owner, as liquidated damages, on each such vessel $300 for each and every day of delay in delivery of such vessel; but it is hereby agreed that the total premium or liquidated damages so to be paid shall in no case exceed the sum of $25,000 for any such vessel. Premiums or liquidated damages shall be added to or subtracted from the final payment hereunder.

IX. *Liens and taxes.*—The contractor agrees to deliver the vessels to the owner free and clear of any lien or encumbrance. The contractor further agrees upon the delivery of each vessel to deliver to the owner all papers and documents necessary and/or convenient to confer upon the owner a full and unencumbered title to such vessels, including classification certificates as herein provided, together with a full release by the contractor to the owner waiving all further claims or demands of any nature, except any claim or demand in regard and to the extent to which the provisions of article VII have been and/or are invoked. When payment is to be made hereunder the owner may require evidence satisfactory to it to be furnished showing what obligations for labor and materials, supplies, or equipment used or to be used in the construction of the vessels hereunder are unpaid, and the owner may at its option, out of any amount not paid to the contractor hereunder, withhold such amount as may be necessary to satisfy such obligations, or with the consent of the contractor satisfy the same. In the event of the filing or attaching of any lien or encumbrance (whether valid or invalid) against the vessel before the final payment the owner may at its option, out of any amounts not paid to the contractor hereunder, withhold such amount as may be necessary to satisfy such lien or encumbrance, or may satisfy

or remove the same. The owner will not exercise its option to satisfy or remove any lien or encumbrance if the contractor desires to contest it, provided that the contractor will immediately take such steps as in the judgment of the owner will prevent such lien or encumbrance from delaying the construction or delivery of the vessels hereunder, and will indemnify and save the owner harmless from any costs, charges, or damages incurred by reason of the contesting of such lien. It is hereby further stipulated and agreed by the contractor for itself and on its own account and for and on account of all persons, firms, associations, and corporations furnishing labor and materials for said vessels that this contract is upon the express condition that no lien or rights in rem of any kind shall lie or attach upon or against any of said vessels or their machinery, fittings, or equipment, or the materials therefor or any part thereof, or of either for or on account of any work done upon or about said vessels, machinery, fittings, equipment, or materials, or of any materials furnished therefor or in connection therewith, nor for or on account of any other cause or thing or of any claim or demand of any kind, except the claims of the owner.

The contractor agrees to pay all taxes, if any, which may be assessed or assessable against the materials on hand and the vessels under construction up to the time said vessels shall be accepted by the owner. The contractor further agrees to pay all income taxes, excess-profit taxes, and all other municipal, State, or Federal taxes which may be assessed or assessable on account of this contract.

X. *Claims and patents.*—The contractor agrees to protect the owner from all claims arising from accidents or casualties to employees, workmen, or other persons in, on, or about the work covered by this contract, and to indemnify the owner against the same.

The contractor shall be responsible for all claims, if any, made against the owner for all infringements of patents or patent rights and for the use of all patented articles, and shall defend and save harmless and indemnify the owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringment of patents or patent rights, or of the use of patented articles, provided that the owner will, in all instances, notify the contractor of any claims made against it by reason of any such infringement or use of patented articles at the time when such claim is made, and will promptly notify the contractor of any suit or suits brought against it therefor and give the contractor an opportunity to defend the same, and provided that no payment shall be made by the owner unless with the consent of the contractor or pursuant to a decree by a proper court in such litigation. Where the owned specifically orders the use of the patent or patented article, whether or not the existence of the patent is known to the parties hereto, the owner will hold the contractor harmless from any expense, loss, or damage arising from a claim of the infringement or use of such patent or patented article, provided that the contractor notifies the owner as soon as such a claim is made, and obeys the instructions of the owner in connection therewith.

XI. *Labor.*—This contract is executed and delivered upon the understanding that, if desired by the United States Shipping Board Emergency Fleet Corporation, a provision, satisfactory in form and terms to the United States Shipping Board Emergency Fleet Corporation, restricting the hours of labor of laborers and mechanics employed by the contractor or by subcontractors and/or providing for the payment o fextra compensation for overtime work, will be inserted in the contract, with the same force and effect as if inserted in the contract before the execution and delivery thereof. If by reason of any such instruction the cost of any vessel hereunder shall be increased, then the sum to be paid by the owner to the contractor as herein provided shall be agreed upon by the parties, and if not agreed upon, shall be determined as provided in Article VII hereof.

XII. *Not assignable.*—This contract may not be assigned by the contractor without the consent of the owner in writing, provided, however, that nothing in this contract shall be construed as prohibiting the assignment of payments due, or to become due, to the contractor, for the purpose of obtaining credit for furthering the construction hereby undertaken, but the owner may by writing make such prohibition.

In order to effectuate the provisions of Article V hereof, the contractor agrees that every contract made by it for the furnishing to it of parts, materials, supplies, machinery, and equipment, or the use thereof for the purpose of constructing the vessels agreed to be constructed hereunder, will in its terms be made assignable to the owner.

XIII. *Members of Congress not to benefit.*—No Member of or Delegate to Congress nor Resident Commissioner is or shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom, but this article shall not apply to any contract within the operation or exception of section 116 of the act of Congress approved March 4, 1909 (35 Stats., 1109).

XIV. *Insolvency of contractor.*—Should the contractor become insolvent, make an assignment, or commit any act of bankruptcy, the owner may and is hereby empowered forthwith to enter, take possession of, and complete the work without giving any notice thereof to the contractor.

XV. *Laborers' and material men's bonds.*—The contractor agrees to procure and keep in force at its own expense, in some company or companies approved by the owner, all such bond or bonds for the protection of claims or liens of laborers or material men as may be required by the laws of the United States.

XVI. *Permits.*—The contractor agrees to comply with all laws, rules, regulations and requirements of the departments of the United States affecting the construction of works, plants, and vessels in or on navigable waters and the shores thereof and all other waters subject to the control of the United States, and to procure at its own expense all permits from the United States, State, and local authorities which may be necessary to begin and carry on the work hereunder, and at all times to comply with all United States, State, and local laws in any way affecting the work carried on under this contract.

XVII. *Cancellation.*—The progress of the work shall be at all times satisfactory to the owner. Should the progress of the work not be satisfactory to the owner, then the owner may, upon 30 days' written notice to the contractor, cancel this contract as to further performance thereof. Thereupon the contractor shall complete only such vessels or parts of vessels as the owner shall direct in writing. The cancellation shall not affect the terms of the contract as to the vessels completed or directed to be completed.

The contractor shall be reimbursed for losses sustained by such cancellation. In computing such losses there shall be included for each vessel under construction a proportionate part of the estimated profit on a completed vessel. Such proportionate part shall not exceed the percentage which the cost of the vessel under construction bears to the cost of a completed vessel. In computing profit or cost the average actual experience of the contractor on vessels constructed for the owner shall be taken as the basis of the computation. In computing such losses the following shall not be included: (*a*) profits on vessels not under construction; (*b*) profits that the contractor might have earned in other transactions.

If the parties can not agree upon the amount of the loss, it shall be determined on the above basis and by arbitrators, one to be chosen by each party and the third by the two so chosen, and the decision of a majority of the arbitrators shall be conclusive and binding upon the parties hereto.

XVIII. The contractor agrees that it will at all times pay the prevailing rate of wages, and that under no circumstances will it pay any wages in excess of the prevailing rate without first obtaining the written approval of the owner. The question of what is the prevailing rate and other questions with regard thereto are subject to the definition and interpretation of the owner. If it should become necessary during the period of this contract to increase the wages of any of contractor's employees, it shall be done only with the written consent of the owner first obtained, in which event the cost of such increase will be borne by the owner, provided that any increase in wages or other increased cost on account of wages made without the written approval of the owner shall be borne by the contractor. If Sunday, holiday, or overtime work be resorted to, it shall be without additional cost to the owner, unless specifically ordered by the owner.

XIX. The contractor's officers, agents, consulting architect, engineer, or other person, retained or employed assistant or consulting agent, or in any other capacity, and all other employees, shall at all times be satisfactory to the owner. No one shall be employed by the contractor, either directly or indirectly, who is not satisfactory to the owner and whose employment is not approved by the owner. If at any time during the existence of this contract in the opinion of the owner any such employee or person is not satisfactory, the contractor agrees, upon notice from the owner, to immediately dispense with the services of such person. All contracts of employment entered into by the contractor and all persons employed shall be subject to the provisions of this paragraph of the contract.

XX. *Checks.*—Payments hereunder shall be made by the owner by check addressed to the contractor by mail at 155 North Clark Street, Chicago, Ill.

In witness whereof the parties hereto have caused this contract to be signed by their respective officers and their corporate seals to be hereunto affixed, duly attested, on the day above stated.

[SEAL.] PENSACOLA SHIPBUILDING CO.,
By A. C. KETLER, *President.*

Attest:
PAUL P. STEWART, *Secretary.*

Countersigned:
M. E. KETLER, *Director.*

[SEAL.] UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
By CHARLES PIEZ, *Vice President.*

Attest:
LESTER SISLER, *Secretary.*

SCHEDULE B.

For 9,000-ton dead-weight ship.

	For 1 ship.	For 10 ships.
	Net tons.	*Net tons.*
Plates	2,250	22,500
Shapes	850	8,500
Flats and rounds	200	2,000
Total	3,300	33,000

Base price, 3¼ cents per pound for plates, 3 cents per pound for shapes, and 2.9 cents per pound for flats and rounds, f. o. b. mills.

Total estimated price, $210,000 for 1 ship; $2,100,000 for 10 ships.

Dates.	Plates.	Shapes.	Flats and rounds.
Jan. 1, 1918	100	100	50
Feb. 1, 1918	200	300	100
Mar. 1, 1918	2,400	500	200
Apr. 1, 1918	2,800	1,500	300
May 1, 1918	3,500	2,000	500
June 1, 1918	5,000	2,000	400
July 1, 1918	6,500	2,000	400
Aug. 1, 1918	2,000	100	50
Total	22,500	8,500	2,000

SCHEDULE C.

MACHINERY AND EQUIPMENT.

Required.	Description.	Manufacturer.	Price.
10	Steam turbines or reciprocating engine, if approved by the owner: multiple expansion 3,000 S. H. P. understeam at 200 pounds I. S. P. 50 deg. superheat, 28-inch vacuum, propeller speed 90 R. P. M.	De Laval Steam Turbine Co., Trenton, N. J.	$730,000
10	Main condensers, Admiralty type, cylindrical pattern, 4,500 square feet cooling surface.	Wheeler Condenser & Engineering Co., Carteret, N. J.	195,000
10	Wet vacuum pumps, 9 by 24 by 12, steam driven, single type, 500 pounds max. per hour at 200 pounds gauge pressure, 50 deg. superheat.	do	
10	Circulating pumps, 14-inch single stage double suction, centrifugal, 4,500 G. P. M., 25-foot head.	do	

SCHEDULE C—Continued.

MACHINERY AND EQUIPMENT—continued.

Required.	Description.	Manufacturer.	Price.
10	Curtissteam turbines, 45 B. H. P. at 3,600 R. P. M. using 42 pounds per B. H. P. hour at 200 pounds gauge pressure, 50 deg. superheat, 3 pounds gauge back pres.	Wheeler Condenser & Engineering Co., Carteret, N. J.	.....
10	Auxiliary condensers, Admiralty type, cylindrical pattern, 1,000 square feet cooling surface.	.....do.....	$60,000
10	Air and circulating pumps, steam driven, 10 by 14 by 14 by 12, bronze fitted.	.....do.....	.....
30	Water-tube boilers, working pressure 200 pounds, heating surface 3,000 square feet, superheat 50 deg., or Scotch boilers as approved by the owner.	De Pere Manufacturing Co., De Pere, Wis.	381,000
10	Evaporators and distillers, 25-ton.....	Kerfott Engineering Co., New York, N. Y.	12,000
10	Oil sets, including pumps.....	Thos. Garrett, New York, N. Y..	12,000
10	Main thrust blocks, including shafts and bearings.	.....do.....	40,000
10	Propeller, line shaft, stern tube, steady bearing and tail shaft sets.	.....do.....	200,000
100	Steam winches.....	Jackson & Church Co., Jackson, Mich.	80,000
10	Steam steerers.....	.....do.....	52,000
10	Windlasses.....	Hart - Parr Co., Charles City, Iowa.	46,000
10	Capstans.....	Jackson & Church Co., Jackson, Mich.	12,000
10	Refrigerating machines.....	Triumph Refrigerating Co., Cincinnati, Ohio.	10,000
10	Generating sets, with switchboards.....	United Electric Construction Co., New York, N. Y.	11,000

Senator JONES. Admiral, I want to ask you about a particular contract that there have been a good many rumors concerning in our country. I think it is the Sloan Corporation, of Seattle. Have you the analysis of that contract there?

Admiral BOWLES. I can tell you generally about the Sloan contract, but I can not remember all the figures.

Senator JONES. I would like to know who that corporation is.

Admiral BOWLES. This contract was made on the 18th day of May, with the Sloan Ship Yards Corporation, a corporation organized under the laws of the State of Washington. The contractor agrees to deliver 16 wooden cargo-carrying steamers, complete, with propelling machinery, auxiliaries, and equipment, afloat at the works of the contractor, at Olympia and Seattle, Wash., the first ship to be delivered not later than January 31, 1918, and so on. The owner agrees to pay——

Senator JONES. Just a moment, Admiral. Do you know when this corporation was organized?

Admiral BOWLES. No; I do not.

Senator JONES. Have you information at your office that will show when it was organized?

Admiral BOWLES. It is possible, but I do not know.

Senator JONES. Do you know how long it has been in the shipbuilding business?

Admiral BOWLES. I have no knowledge of that, but I think it was a new company.

Senator JONES. Do you know whether any of the men who composed this company had been in the shipbuilding business?

Admiral BOWLES. I do not. You must remember, Senator, that I entered the Fleet Corporation on the 13th day of August of this year, and this is one of the troubles I inherited.

Senator JONES. Then, Admiral, what I would like would be for you to acquaint yourself with all the facts and information that you have at your office with reference to this company. I will not ask you about it now, but I will take that up later. I want to do this in order to get the facts in the record in justice to this company as well as to find out what the actual facts are, because there have been some very ugly rumors circulated about this company—how it got its contract and all that. So I would like to have you acquaint yourself with all the facts and the information you have with reference to it, so that at a later time we can go into that contract in detail. I will not ask further about it here.

Senator HARDING. Admiral, do any of these contractors write their own specifications?

Admiral BOWLES. Yes; but they are all subject to our revision. Of course if the contractor offers to build a ship of his own design and which he has built before, why, we then take his plans and specifications and pass upon them as to their sufficiency.

May I go on with the requisitioning of ships, Mr. Chairman?

The CHAIRMAN. Was this contract for steel ships?

Senator JONES. Their contract was for wooden ships.

Admiral BOWLES. The power to requisition vessels was delegated by the president to the Fleet Corporation under the Executive order of July 11, and in accordance with that Executive order the Fleet Corporation issued a telegram on August 3, 1917, to each shipbuilder in the country requisitioning all power-driven, cargo-carrying, and passenger vessels above 2,500 tons dead weight, and all the materials, machinery, equipment, and outfit pertaining thereto.

The letter was sent upon the same day and is a mere extension of the telegram. It orders the shipbuilders to proceed with all possible dispatch in the completion of these vessels and states that compensation will be determined later. The shipbuilder is asked to supply information as to the vessels he is building, to submit their plans and specifications, his contracts, and the payments that have already been made to him. The letter also asks for the names of the owners and directs the shipbuilder not to enter into any additional contracts without permission.

I want to call attention to the fact that this requisitioning order requisitioned or commandeered these ships themselves and not the contracts. The contracts, of course, were entirely unknown to the Fleet Corporation, and we could have no knowledge of them until the ship builders sent out their copies of these contracts.

I entered upon my duties in the Fleet Corporation on the 13th of August, and among other things assigned to me was to take charge of this requisitioning business. On the 16th day of August I issued a letter to all shipbuilders through our district officers, in which I directed the district officers to take charge of the completion of these vessels, to take over the former owners' inspectors wherever they were competent and apply them and keep them on the job. That letter also informed the shipbuilders that until we had an

opportunity to examine their contracts we would pay them their actual outlay for labor, materials, and overhead. I saw it was necessary that every shipbuilder should be kept supplied with money, otherwise the work would stop.

Now, from the number of contracts that had begun to come in, I saw it was going to be impossible for us to examine each contract on its merits and arrange a method of compensation to the shipbuilder based upon such an examination; so that on August 22 a letter was issued to the shipbuilders in which we made them the offer, as a reasonable price for the completion of the work, of an amount equal to the payment set forth in the contract and not yet made. In other words, the corporation decided that it would be paying just compensation to the shipbuilders if it paid them an amount equal to the amount remaining unpaid under the contracts under which the ships were being constructed. Of course this was an arbitrary and wholesale way of establishing compensation to the shipbuilders——

Senator NELSON. But they got under that plan all they were entitled to under their contracts?

Admiral BOWLES. They got every cent that they had expected to get. Of course various plans were considered by us for establishing this compensation, and you will recognize that under the law of eminent domain it might have been necessary for us, pursuing the usual methods, to appraise the vessel as of August 3, and then establish what the value was then, what the shipbuilder had received, and what was due him for the completion of that ship; and I was urged by some of those whom I had associated with myself in this work that that must be done. But I felt that if I attemptd to do that all over the United States, in about 431 contracts, and applied what might be called an ordinary method of compensation to the shipbuilders, I would have at least a third of them in bankruptcy before we really got started. Therefore this method was adopted, and within a very short time had been accepted by a large majority of the shipbuilders.

Senator NELSON. This method of paying them what was due them under the contracts?

Admiral BOWLES. Yes, sir. At the present time I believe there are only two shipbuilders who have not fully accepted the conditions of the requisitioning program. In one case the reason for delay was because we did not discover until quite recently that the ships building by this company were subject to requisition. In the other case the people who controlled the shipyard have been endeavoring to reach better terms than they were entitled to. Mr. Cuthell tells me at this moment that there is only one company outside of the one last mentioned.

Senator NELSON. One company that has not accepted your terms?

Admiral BOWLES. Yes, sir.

Senator NELSON. That is a very fine record, I think.

Admiral BOWLES. As soon as we got from the shipbuilder an answer accepting the terms of our letter of August 22 we then wrote them a specific order to proceed with the completion of these vessels, and told them exactly what they would be paid, and established the method of payment, which was to make the payments as they became due under their original contracts. Of course some vessels were

building under cost-plus contracts, and all those arrangements were made.

Senator NELSON. In other words, you carried out the contracts?

Admiral BOWLES. We certainly did.

The CHAIRMAN. The original contractors in consideration of what you would pay them, were to go on looking after the work, were they not? They were not simply to quit and let you take hold of the ship at that point?

Admiral BOWLES. That is the arrangement with the original owners, Senator, that you are asking me about now?

The CHAIRMAN. Yes.

Admiral BOWLES. With regard to the original owners, we took over their inspectors and put them on our pay roll. That had the advantage of not interrupting the progress of the work of those who knew about it, and it kept the original owners in a state of quiescence, because they felt that however these ships might be disposed of in the future, they still knew what was going on. But we forbade the shipbuilders to receive any money from the original owners or any directions from them. We were glad to have them, where they had engineers or superintendents to volunteer their services and give us such advice as they wished to, and we always paid attention to it; but we prevented them from giving any orders to the shipbuilders with regard to their vessels.

The reason for this action was that our conception of the requisitioning order was that on August 3 the United States took actual title to these ships, they became the property of the United States, and the duty of giving instructions with regard to them remained with us.

In addition to the instructions that I have told you about, we issued on the 16th of August certain instructions to all the shipbuilders with regard to the completion of these vessels. These instructions were based upon the consideration of hastening the completion of the vessels, the rendering them of the least visibility in the war zone, supplying them with guns, magazines, and quarters for the armed guard, and additional boats and lookouts necessary for safety in the war zone. These instructions were issued specifying the things that we thought could be omitted from vessels that would hasten their completion, and we specified only a few things which must be done in every case, and they related to the military and ware zone requirements.

Senator NELSON. That ought not to go in the record, ought it?

Admiral BOWLES. I think not. In addition to issuing these instructions, we sent responsible officers in the Fleet Corporation to visit every shipyard, to go over with the builders every vessel, to take up every item in this letter, and issue specific orders on the spot as to what was to be done with each vessel, in order that we might not lose the time that would result from having reports made and letters written in regard to the ships.

Now, I should like to explain the attitude toward the former owners. As soon as we received information from shipbuilders stating the names of the owners and the contracts under which their ships were building we wrote a letter to the former owners and told

them that their ship had been requisitioned, asking them to supply us with full information as to the payments they had made, to present the actual proof of payment, telling them that it was the policy of the Fleet Corporation, so far as practicable, to reimburse them for the payments that they had actually made, and asking them, in addition to those payments, to submit to us a full statement of any additional expenses which they had been put to for superintendence, etc., in connection with these ships. In other words, it was to supply us with the information upon which we could base the just compensation to the former owners contemplated by the law. That information has been in large measure supplied by the various owners, and in some few cases actual settlement has been made.

But, seeing the magnitude of this task and how it might affect the domestic owners, we early invented a policy which would avoid the troublesome negotiations of a settlement and the probability of litigation by offering to every American owner to return his vessel to him, either when it was completed or after the war was over, on the condition that he should reimburse the Government for the expenditures that it had made in the completion of the ship, in expediting it and in arming it, should he then want to take the ship over, agree to the Shipping Board's requisitioning program, and operate that vessel under the direction and for the purposes of the Government.

I think I can fairly say that a very large proportion of the American owners have accepted or indicated their desire to take advantage of those conditions, and that thereby we have eliminated a large proportion of the Government's investment in these requisitioned vessels. We have not discouraged American owners from pursuing their occupation and their collateral developments, of which these ships form a part, and we have avoided the principal part of the litigation that was expected as the result of this requisitioning program.

The CHAIRMAN. How about the foreign owners?

Admiral BOWLES. I think that in the tables I submit to you in connection with the requisitioning program there are one or two things that I might mention now. One is the proportion of these vessels which were owned by domestic owners and by foreign owners. I have explained to you the policy under which we are negotiating with American owners, but as regards foreign owners I think, Mr. Chairman, I should like to deal with that matter in executive session. But I will state to you now that of the 431 vessels subject to requisitioning, approximating 3,000,000 tons dead-weight, 183 were domestic-owned vessels of a dead-weight tonnage of just about a million and a half. The other half, the other million and a half tons, were placed in American shipyards by foreign owners, and of those the British owned nearly 1,000,000.

Perhaps I should explain that I am dealing solely here with the requisitioning of vessels under construction, and that matter should not be confused with matters that have been heretofore before this committee relating to the requisitioning of going ships, which is entirely another matter and concerns the Shipping Board only and not the Fleet Corporation.

The CHAIRMAN. Have you the number of those anywhere in the record?

Admiral BOWLES. I know nothing whatever about that, but I did hear some numbers mentioned.

Senator NELSON. We will have to get that from Mr. Hurley.

Senator JOHNSON. That has been testified to, I think. Between June 15 and July 10 there were three; between July 11 and August 3 two that went out from under the flag, according to the testimony of Mr. Donald the other day.

The CHAIRMAN. I am speaking about the number we actually requisitioned of completed ships.

Admiral BOWLES. I think that was given in Mr. Hurley's statement.

As to the results of the requisitioning program I perhaps should make some statement. It has resulted in the actual control of the output of all private yards in the United States by the Fleet Corporation. I perhaps should explain to you that the program of construction of the Fleet Corporation necessitates the use of the maximum capacity in various manufacturing industries, and that in order that there shall be no delay in any shipyard it is necessary for the Fleet Corporation to exercise its power to distribute these manufacturing capacities uniformly and fairly among the various shipyards. That is only possible through the requisitioning. I suggest to you that you hear the purchasing officer of the corporation, Mr. Brown, who has had charge of that matter.

In addition to that, it has enabled the Government to carry out its program at reasonable and fair prices by the elimination of competition of foreign nations and private owners. It has secured to the United States the ships being built in our yards with money borrowed from us. It has enabled the Fleet Corporation to assure itself that every vessel leaving our ports when completed will have all the safety appliances necessary for the war zone, and a suitable armament and suitable quarters for the armed guard—things that are absolutely essential to the safety of these ships.

Now, it has been claimed by some that the requisitioning program caused delay in the completion of the ships. It is hardly possible that such a sweeping order as the requisitioning order and the transfer of authority from a vast number of private owners to any Government institution could be accomplished without some delay, but the delay, in my judgment, was largely psychological, and there was no actual occasion for it. In cases where there was delay it was principally due to the desire of shipbuilders to take advantage of the requisitioning program to get more money for themselves.

Senator NELSON. Which they did not get, according to your statement?

Admiral BOWLES. They did not get it from me.

Senator NELSON. I mean, they did not get it from the Government?

Admiral BOWLES. It is only since the Shipping Board has increased wages that we have begun to have complaints from the builders of the requisitioned vessels that they are not receiving suitable compensation. That has been largely allayed by the decision of the Shipping Board to pay to builders of requisitioned vessels also the increase in wages which they have made.

Senator NELSON. That is, the arbitration increase and the bonus increase both?

Admiral BOWLES. Yes. There has been only one case, Senator, in which we have paid more than the contract prices arranged for for requisitioned vessels, and that was done in this way. There have been a few cases where the former owners, knowing that the vessels were to be transferred to them on completion, have been willing to authorize the Fleet Corporation to pay an extra price to get that ship finished, so that while we have paid out the money we will get it all back when the ship is finished, and it is not a matter that affects the United States in any way, except as an accommodation to the original owner.

I am submitting a complete list of the vessels requisitioned, giving the name of the shipyard and its location, the name of the former owner, the dead-weight tonnage, the contract price, the nature of the contract, and the estimated date of completion. In addition to that, I am giving you a combined summary table showing the number of vessels in each shipyard, their dead-weight tonnage, their total cost as specified by the contract, and the average cost per dead-weight ton.

The CHAIRMAN. Will these tables show the number of vessels upon which work has been begun and the number of vessels not yet started?

Admiral BOWLES. That is shown in the tables which I am also submitting—the exact progress on every vessel.

Senator NELSON. Is it proper for these things, Admiral, to go into the record? If there is no objection, I should like to have them go in, unless there is something in them of a confidential nature.

Admiral BOWLES. I see no reason why they should not go in.

Senator NELSON. Then I ask that they be printed in the record.

The CHAIRMAN. Without objection, these will go in the record.

Admiral BOWLES. In addition to that, I am submitting a table giving a list of these requisitioned vessels by types, showing the number of cargo vessels, tankers, colliers, passenger vessels, and ore carriers, and also a special list giving the number of vesels on the Lakes.

Senator JONES. You see no objection to that going in the record?

Admiral BOWLES. I see no objection whatever.

Senator NELSON. Nor to your letters of instructions, either?

Admiral BOWLES. None.

Senator NELSON. Let it all go in, then, Mr. Chairman.

The CHAIRMAN. Without objection, all those tables and letters will go in.

(The tables and letters referred to are here printed in full, as follows:)

Total number and total dead-weight tonnage of all requisitioned vessels.

[Dec. 20, 1917.]

Builder.	Number of hulls.	Total dead-weight tonnage.	Total cost.	Average cost per ton.
Albina	6	21,800	$3,019,300	$138.50
American	38	153,600	27,348,730	178.05
Ames	13	113,900	16,639,400	146.09
Baltimore	11	67,000	11,032,600	164.66
Bethlehem	15	142,510	23,791,115	166.94
Chester	28	248,200	35,320,900	142.30
Columbia River	10	88,000	11,640,640	132.28
Craig	2	6,000	890,000	148.33
Wm. Cramp & Son	9	61,758	12,693,716	205.57
J. F. Duthie & Son	12	105,600	14,278,620	135.21
Fore River	9	93,200	11,112,440	119.23
Globe	4	14,000	2,150,000	153.57
Great Lakes	31	119,300	19,485,500	163.33
Hanlon	2	11,000	1,469,050	133.55
Harlan & Hollingsworth	12	70,110	9,184,572	131.00
McDougall-Duluth	9	28,300	5,317,418	187.89
Manitowoc	14	48,400	6,170,000	127.47
Merrill-Stevens	1	6,500	1,137,500	175.00
Saml. L. Moore Sons	3	11,800	2,865,680	242.85
Moore & Scott	7	63,500	8,922,950	140.51
New Jersey S. B. Co	12	60,000	10,500,000	175.00
New York S. B. Co	23	184,620	12,495,626	67.68
Newport News	9	87,910	8,596,000	97.78
Pennsylvania	19	194,500	24,871,875	127.87
Pusey & Jones	14	58,800	9,421,250	160.22
Seattle Const. Co	12	93,000	11,920,000	128.17
Skinner & Eddy	8	70,600	11,702,800	165.74
Standard	13	91,900	13,552,550	142.80
Staten Island	5	17,500	2,514,000	143.65
Sun	16	161,100	22,759,054	141.27
Tampa	2	7,000	1,225,000	175.00
Texas	13	120,300	18,057,030	150.10
Toledo	10	29,300	4,128,000	140.88
Union Iron	24	270,000	39,306,680	145.58
Williamette	15	132,000	20,266,000	153.53

Total requisitioned vessels	431
Total dead-weight tonnage	3,056,008
Total cost	$435,787,890
Total average cost per dead-weight tonnage	$142.66

Summary list of all requisitioned vessels by types, showing total dead-weight tonnage for each type and average cost per dead-weight ton for each type separately; also average cost per dead-weight ton for all types combined, and total estimated cost for all ships requisitioned.

	Total number.	Total dead-weight tonnage.	Average cost per dead-weight tonnage.	Total cost.
Cargo vessels	346	2,282,910	$149,042	$340,250,887
Tanker vessels	60	584,130	121,007	70,684,245
Colliers	10	77,150	64,290	4,960,032
Passenger and cargo	9	43,558	195,082	8,497,408
Ore carriers	6	68,260	166,939	11,395,324

Grand total of requisitioned vessels	431
Grand total tonnage	3,056,008
Grand total average cost per dead-weight tonnage	$142,600
Grand total estimated cost of all requisitioned vessels	$435,787,896

Includes estimated cost of vessels building on cost plus basis.

Requisitioned vessels of ocean type building on Great Lakes.

Builder.	Number of hulls.	Dead-weight tonnage.	Total cost.	Average cost per dead-weight tonnage.
American	34	107,600	$20,269,480	$188.37
Globe	4	14,000	2,150,000	153.57
Great Lakes	30	106,300	18,947,000	178.24
Manitowoc	14	48,400	6,170,000	127.47
McDougall-Duluth	9	28,300	5,317,418	187.89
Toledo	10	29,300	4,128,000	140.88
Total	101	333,900	56,981,898	170.65

Reconveyed, not suitable for ocean service and not included in the above, 5 vessels, 59,000 dead-weight tonnage; 24 vessels, dead-weight tonnage 85,090, completed and accepted.

Senator JONES. Let me ask you a question right there; that may not cover it. Have you requisitioned all the vessels in our shipyards being built for foreign Governments?

Admiral BOWLES. Every one over 2,500 tons, power-driven vessels.

Senator JONES. And it would not be the policy of the Fleet Corporation to permit contracts to be made in our yards for foreign Governments for vessels over 2,500 tons.

Admiral BOWLES. I think I can show you, Senator, that for the purposes of the Government every bit of the principal materials required should be at the disposal of the United States, and that it is not good policy to permit any contracts to be made for foreigners or anybody else.

Senator HARDING. Apropos of your last statement, Admiral, I have a letter here from a very sane man on the shipping question, in which he makes this statement. He is speaking of men who can get no contracts from the Government and are not allowed to build for private parties. He is writing from the West coast. He says:

> I was talking to one to-day who says his plant has been ready since May, with two ways all ready for building ships. He has received no contracts, nor is he permitted to build for private interests, American or foreign. He has his money invested in his plant, has his organization complete, and his employees are eating their heads off waiting for the Government to decide what it will do with them or to them.

Admiral BOWLES. Might we know who the gentleman is, Senator?

Senator HARDING. I do not know the name of the firm. The name of the writer I will tell to you individually; I do not know that he cares to appear before the committee. You will recognize his eminence when I show it to you.

Admiral BOWLES. Of course, I am only answering as to the general situation, but I think I can show you clearly what that is.

Senator JONES. At any rate in a case like that, Admiral, it would be the policy of the corporation to get that yard busy as soon as possible, would it not?

Admiral BOWLES. Absolutely.

Would it be desirable, Mr. Chairman, for me to make any further analysis in regard to some of these tables I am submitting?

Senator NELSON. Yes; give us all of them.

Admiral BOWLES. Of all the vessels that are building under requisition there are 346 cargo vessels, 60 tankers, 10 colliers, 9 passenger and cargo vessels, and 6 ore carriers.

Senator NELSON. What proportion of these vessels that you requisitioned are now afloat—the number? You gave it once, I think.

Admiral BOWLES. I gave you simply the list of the vessels that had been actually completed. Of the 431 vessels, 158 had their keels laid before August 3.

Senator NELSON. But how many are now completed of the total number?

Admiral BOWLES. The total number completed is 49 ships.

Senator NELSON. Forty-nine ships of the requisitioned ships?

Admiral BOWLES. Yes; but in order to give you an idea of their progress, apart from the diagrams I have shown you, I say that of the 431 vessels, 158 keels had been laid before August 3. Since August 3, 101 additional keels have been laid. There are 172 of which the keels are not yet laid, and there are 80 vessels that have been launched since August 3.

On the Great Lakes there were 101 vessels requisitioned, of 334,000 dead weight tons.

Senator HARDING. Admiral, were any of those Lake vessels requisitioned short in bunker capacity for trans-Atlantic service?

Admiral BOWLES. All of the vessels we requisitioned on the Lakes and finally took were suitable for trans-Atlantic service, and most of them had been built for that specific purpose.

The CHAIRMAN. Were there any changes in the designs or specifications as to these requisitioned vessels?

Admiral BOWLES. Yes. I have already described the orders that were sent out with regard to changes. Some of those changes were necessary for defense and some were necessary to increase the safety of the vessels, as by installing additional bulkheads. Others were necessary to decrease the visibility—taking down masts and taking off derricks.

The CHAIRMAN. Were those changes the cause of any delay?

Admiral BOWLES. I think not. Wherever a vessel was approaching completion and it was found that a change would cause delay we let the vessel go without those changes. Many of these changes reduced the time necessary for the completion of the ships.

Senator CALDER. Admiral, have you concluded with the requisitioned vessels?

Admiral BOWLES. I have concluded with the requisitioned vessels.

Senator CALDER. In making your contracts with private concerns for the building of ships, in many instances have the contractors failed to materialize with substantial progress?

Admiral BOWLES. Yes.

Senator CALDER. My attention has been called to one case, the Traylor Ship Building Co., of Cornwells, Pa. I understand their contract calls for 10 wooden ships. I have a statement here that a contract was made on June 16, and late in November they had made no progress at all. Are there many like that, or is the statement I have made correct?

Admiral BOWLES. I think they have made some progress, and the principal reason for their delay is that which affects all the wooden-

ship builders—the lack of material. There are shipbuilders whose condition of progress is not equal to Traylor's in proportion to what they have contracted to do.

Senator HARDING. Appropriate to that question, Admiral, have we undertaken to build wooden ships larger than were approved under the old wooden ship program when we were building wooden ships?

Admiral BOWLES. As I understand the situation, Senator, an ocean-going steam wooden cargo vessel has hardly been built in the United States as a regular thing for between 60 and 70 years. In those days, in the fifties and sixties we did build wooden steamers of larger size than those called the Ferris type; but of course in those days lumber was more plentiful and it was easier to get it in larger sizes suitable for construction.

Senator HARDING. The point I was leading to is this. Is not the difficulty in furthering the wooden ship program due to the fact that the size decided upon makes the material very difficult to get?

Admiral BOWLES. Yes; that is true. But the object in building these wooden vessels was to provide ocean transportation, and the purpose of the design was to build the smallest vessel and the vessel using the smallest timbers that would make it worth while for that purpose. Now, if the vessel had been, say of 2,000 tons dead-weight it would have been practically worthless for ocean transportation, and while the timbers would have been smaller, they would not have been, in my judgment, so much smaller as to have made a material difference in the speed of production.

Senator NELSON. Would not wooden vessels be likely to be sooner completed than steel vessels?

Admiral BOWLES. I think that was a popular notion.

Senator NELSON. Is there anything in that popular notion? Is there any merit in it or is it really true?

Admiral BOWLES. The answer to that, Senator, all depends upon the scale on which you attempt these things. The scale upon which it has been attempted to go into wooden ship building is entirely beyond the capacity of the supply of material. You might take an individual wooden vessel in a locality where the timber was near and labor was plentiful and build it as swiftly as you could a steel vessel, but not otherwise.

Senator NELSON. But even then you could not build it swifter than a steel vessel.

Admiral BOWLES. I think not. The facts are clear.

The CHAIRMAN. As I recall Mr. Donald's statements regarding tonnage of ships that he was operating before he came into the board, none of them were as much as 3,000 tons, perhaps not as much as 2,500 tons. He operated a line betwen New York and the West Indies, but not trans-Atlantic. They were cargo ships.

Admiral BOWLES. Have I answered Senator Calder fully?

Senator CALDER. I think you have. I have a statement here, gentlemen, which refers to a number of wooden shipyards with little or no progress made. What is the reason of that?

Admiral BOWLES. The reason for that is the slow delivery of yellow pine on the Atlantic coast.

Senator CALDER. Is that caused by a change of plans?

Admiral BOWLES. Some delay has been caused by a change of plans, but that is not the principal cause of the delay. I should like

the opportunity, Mr. Chairman, of explaining fully concerning the changes in the plans of the wooden vessels.

The CHAIRMAN. Will you do that in executive session?

ADMIRAL BOWLES. No, sir; I would like to do that in public.

Senator HARDING. Let us have it right now, Mr. Chairman.

The CHAIRMAN. Of course you did not go in until August 13. Many of these designs and plans, I take it for the wooden vessels, had been perfected before that.

Admiral BOWLES. When I went in practically all the wooden contracts had been made. There were a few made afterwards. The designs had been established, the specifications had been issued, and a large portion of the orders for lumber had been placed.

The CHAIRMAN. Do you know the changes made prior to your going in?

Admiral BOWLES. The changes made prior to my going in amounted to very small things, and were principally changes reducing the dimensions and sizes of lumber in order to make it easier for the contractors to supply, but they did not affect the design of the ship. What I found was that the plans had been approved by the American Bureau of Shipping, which was under agreement with the Fleet Corporation to class these ships first class for 15 years, and to survey their construction. I also found that Lloyds, the English classification society, and the one principally used throughout the world, had refused to class these ships for any term. And so I inquired from the chief surveyor of Lloyds what his reasons were, and he gave me his reasons quite extensively. There were two principal reasons: One was that he objected to the location of the engines and boilers in the center of the length of the ship, fearing that the changes in shape which occur in all wooden vessels would interfere with the operation and maintenance of the machinery, and principally the shafting; his other reason was that the floors, that is the frames in the bottom of the ship, were insufficient in depth to prevent the deformation of the bottom. There were various other smaller things. I considered those things with Mr. Ferris. I submitted the plans of the Ferris vessels to various old shipbuilders, men of great experience. I know, of course, of my own knowledge, having started in while wooden shipbuilding was still common in this country, that there is no absolute standard in wooden ship construction. It is a question of experience in general.

The CHAIRMAN. Does the American bureau have any rules for building such vessels?

Admiral BOWLES. Substantially, no. These are vessels which are of a type which have been obsolete 50 or 60 years.

The CHAIRMAN. What is the type, generally speaking?

Admiral BOWLES. Why, it is a vessel with wooden frames and wooden floors, diagonally strapped on the sides, steel strapping, planked with wood, with decks of wood, and driven by reciprocating engines of 1,500 horsepower, steam boilers, and single screw.

The CHAIRMAN. Double bottom?

Admiral BOWLES. There is no double bottom in a wooden vessel.

The CHAIRMAN. How were the keels?

Admiral BOWLES. Wooden keels.

I considered these objections of Lloyds with Mr. Ferris, and, as I say, I obtained opinions from experienced wooden-ship builders.

The consensus of opinion was that the Ferris type was satisfactory as designed. I felt, however, that in building substantially 400 of these ships that it was not wise to take a risk which could be avoided by some slight change, and so I decided to do these things: To increase the depth of the floors and to practically double them by placing an additional timber on the top of each floor, a 12-inch timber 40 feet long, except under the engines and boilers, where it had to be placed between frames. I introduced a wooden bulkhead in the middle of the forehold and in the middle of the afterhold. I made all the bulkheads which had been diagonal bulkheads into log bulkheads, and we stiffened up the shaft alley by heavy logging.

In addition to that I found that the specification for the quality of the southern pine which had been contracted for was unsuitable for planking and decking and parts of the vessel exposed to the weather, and I changed it to what it ought to have been in the beginning, and required heart yellow pine.

The CHAIRMAN. Did the American Bureau of Shipping suggest that?

Admiral BOWLES. No.

The CHAIRMAN. None of those changes?

Admiral BOWLES. None of those changes were suggested by the American Bureau of Shipping. They approved them, and we have a letter on file stating that they believe that now everything has been done which it is possible to do in wooden-ship construction, so far as design is concerned, to make these ships substantial and seaworthy.

Senator JONES. Who make up this American Bureau of Shipping and what experience have they had?

Admiral BOWLES. The American Bureau of Shipping is an old institution, started, I think, in 1862, and it has been carried on for the survey of American vessels and their classification for insurance. It has been reorganized within the last two or three years and new money and new people have gone into it, and it has a set of rules for wood and steel construction and a staff of surveyors for testing materials and inspecting the progress of work in shipyards and the classification of vessels for insurance.

Senator NELSON. Is it incorporated?

Admiral BOWLES. I think it is.

Senator NELSON. From what source do they get their income?

Admiral BOWLES. They get their income from fees paid by the shipbuliders for this service; they are paid by the shipbuilders or the owners, as the case may be.

The CHAIRMAN. The statement regarding them in Mr. Hughes's report, a late publication, Handbook of Ship Calculations, Construction and Operation, is [reading]:

American Bureau of Shipping.—This society was incorporated by act of the Legislature of the State of New York in 1862 for the purpose of collecting and disseminating information upon subjects of marine or commercial interest, of encouraging and advancing worthy and well-qualified commanders and other officers of vessels in the merchant service, of ascertaining and certifying the qualifications of such persons as shall apply to be recommended as such commanders or officers, and of promoting the security of life and property on the seas. Home office in New York.

Senator JONES. According to that, it apparently does not have much to do with looking after the construction of ships?

The CHAIRMAN. It would not appear so from their original charter. This reorganization that the admiral mentions may have brought that in. Do you remember when that took place, Admiral?

Admiral BOWLES. I can not say definitely, but I think it was two or three years ago.

Senator JONES. Who was at the head of the reorganization?

Admiral BOWLES. Mr. Stevenson Taylor, of New York, is the president of it.

Senator JONES. What experience has he had in shipbuilding, do you know?

Admiral BOWLES. Mr. Taylor was for many years a member of the firm of Fletcher & Co., in Hoboken, builders of engines and boilers and of river and passenger vessels around New York, one of the oldest and most experienced firms. After that he went with Quinard & Co., who are also builders of engines and boilers and ship machinery. He has been for many years a consulting engineer of the Old Colony Steamboat Co., and, so far as I know, has been connected with the business all his life.

Senator JONES. Has he had anything to do with the building of ships, as distinguished from boilers and machinery?

Admiral BOWLES. No, I think not.

The CHAIRMAN. Who were the other officers?

Admiral BOWLES. The chief surveyors are the active people; Mr. McClelland, Mr. Sharpe, and Mr. Lang.

The CHAIRMAN. Is Mr. McClelland still with them?

Admiral BOWLES. That I am not quite sure about. The person that I had dealings with was Mr. Sharpe, the chief surveyor.

The CHAIRMAN. Who is Mr. Lang?

Admiral BOWLES. Mr. Lang is the chief wood surveyor.

The CHAIRMAN. What has been his business before, if you know?

Admiral BOWLES. Mr. Lang was in business in New York in the firm known as Pechin & Lang; he was an old wooden-ship builder.

Senator HARDING. We have a Government inspection service, Admiral, that must pass upon ships before they can go to sea?

Admiral BOWLES. Yes; we have the Steamboat-Inspection Service of the Department of Commerce. They have rules which require the inspection of materials going into boilers, and they inspect certain features of the construction of the ship, and they make certain tests with regard to materials going into the engines. They also inspect all life-saving appliances—boats, davits, and detaching apparatus—hulls, and certain features in regard to the quarters of the crew.

Senator NELSON. But they have nothing to do with the construction of the hulls?

Admiral BOWLES. Yes; they have quite a good deal to do with that, and I am now consulting with them to see if I can not eliminate them as an inspecting force except for life-saving appliances, because so many inspecting forces cause delay in the construction of vessels, and I believe they are going to consent to it.

The CHAIRMAN. Why not utilize them entirely and eliminate these other people?

Admiral BOWLES. Because they are unnecessary and the other people are absolutely essential.

Senator CALDER. They have no organization to provide ships?

Admiral BOWLES. No; their organization is incomplete.

Senator CALDER. And are mostly all seafaring men rather than shipbuilders?

Admiral BOWLES. I beg pardon.

Senator CALDER. Very few of the men in that service have had shipbuilding experience?

Admiral BOWLES. I think very few; but I would like to explain why I say their services are not necessary at the present time for our fleet and the others are. The commercial value of a cargo vessel or an ocean-going ship is largely dependent upon the classification and inspection of the Classification Society. The certificate of Lloyds carries weight and assurance of quality upon which everybody in the shipping business depends, and that is an essential thing.

Senator HARDING. Did Lloyds approve of your revised plans, Admiral?

Admiral BOWLES. No, sir; they did not; and I did not ask them to.

I would like to complete my answer about that matter, because I mentioned that one of their principal objections was that the engines and boilers of our ships were amidships. They thought they ought to be placed in the stern. I went into that matter and gave it a great deal of thought and attention, and I came to the conclusion that Lloyds were wrong; that the wooden vessels would be subjected to much greater strains, particularly when light, with the engines and boilers in the stern than they would when they were amidships; and I think that the consensus of opinion takes that view. My feeling was that the changes we had made in these ships would render them safe. The thing which most often happens to wooden vessels is a deformation of the bottom—that is, the keel actually going upward above its proper place without being apparent on the side of the ship at all. That occurs when the vessel is light and the pressure of water forces the bottom up. Some wooden vessels when docked have been found with the keel gone up as much as 5 or 6 feet. All the changes that I made in the ships were intended to prevent that by the stiffening of the frame and of the bottom and the placing of these bulkheads. I did not ask the Lloyds to classify the vessels, because I thought that we had obtained by their comments and the information that we had everything that would be useful to us in that respect.

I feel that the safety of these vessels and their merit depends more largely than anyone knows, not upon the design of the ship but upon the honesty, I will say, of her construction, the care with which the parts are put together, and the care with which the fastenings are placed and made secure.

The CHAIRMAN. What system of construction is adopted by the Ferris design? Is it transverse of longitudinal?

Admiral BOWLES. It is transverse; there is no other method for a wooden ship.

Senator CALDER. Were the designs for these wooden ships submitted to the American Bureau?

Admiral BOWLES. Yes; they were approved by the American Bureau.

Senator CALDER. And the alteration of the plans, too?

Admiral BOWLES. Yes.

Senator CALDER. What method of inspection, Admiral, do you have in the shipyards where these vessels are being constructed?

Admiral BOWLES. We have the country divided into districts. There are 10 districts, and each district officer is charged with the inspection of the work under contract as well as that of the requisitioned vessels. He is required to have in each shipyard a suitable force of inspectors to follow every detail and to familiarize themselves with the plans and with the progress of the work. They report to him and he reports to us.

Senator CALDER. Does the American Bureau have an inspection service side by side with yours?

Admiral BOWLES. The American Bureau have an inspection service in conjunction with ours.

Senator CALDER. At each yard?

Admiral BOWLES. No; they have a representative which covers a district. The only place where they have a representative all the time is in these great fabricating yards. Under the fabricating contracts we have required classifications by both classification societies, and we have arranged that they shall never give divergent instructions.

Senator JONES. You mean Lloyds and the American Bureau?

Admiral BOWLES. Lloyds and the American Bureau both are inspecting every vessel built in these fabricating yards.

Senator JONES. Does each one of them maintain about the same sort of inspectors?

Admiral BOWLES. So far as I know, they do. We do not duplicate inspection of materials. They divide that up among themselves, the American Bureau taking certain ships and Lloyds taking certain ships, and for the fabricating yards we obtain reduced fees from them, because they maintain a permanent force there.

Senator NELSON. What is the difference between what you call a "fabricating yard" and any other yard?

Admiral BOWLES. That will require quite a long explanation, but I am happy to make it.

The CHAIRMAN. Before you get into that I would like to call your attention to what Mr. Hughes says on pages 253 and 255 regarding systems of construction [reading]:

> There are two systems for merchant vessels, viz, the transverse, as shown in figure 39, following Lloyd's or other societies' rules, and the longitudinal or Isherwood, as in figure 40. The former has a large number of comparatively small frames closely spaced, connected by brackets to beams, thus forming a complete section.

And on page 255 he says [reading]:

> Until recent years iron and steel merchant vessels were framed on the transverse system, but in certain types, as bulk cargo and oil tankers, this has been replaced by the longitudinal or Isherwood system.

Do you agree with that?

Admiral BOWLES. Yes, sir; that is all true. But that refers to steel ships. He says "iron and steel" ships. Of course, in wooden vessels there is no possibility of longitudinal construction, because the principle of longitudinal construction depends upon the use of long girders, stretching from bulkhead to bulkhead, and, of course, it is girders that we can not get in wood.

Senator HARDING. Admiral, there has been much said here about delays incident to the difficulty in getting the specified yellow pine, has there not?

Admiral BOWLES. Yes, sir.

Senator HARDING. Is there any substitute for the yellow pine which is quite as dependable in wood construction?

Admiral BOWLES. There is Douglas fir on the west coast; but, Senator, will you permit me to finish one point of this wooden-vessel construction by mentioning something about the delay caused by the changes I made?

Senator HARDING. It just occurred to me, and I would like to have had that brought out.

Admiral BOWLES. The changes I made in the wooden vessels I estimate would cost from $20,000 to $25,000 a ship. And, considering how few vessels had been begun, I do not believe that those changes would make any delay in the completion of the program.

The CHAIRMAN. Did they require larger timbers?

Admiral BOWLES. They required nothing larger than was there before, but they required a few more of the larger timbers.

The CHAIRMAN. Can you state when that first change was ordered?

Admiral BOWLES. I think that the change that I made in the specifications of the lumber occurred on the 15th day of October, and these other changes were made within a few days after, perhaps a couple of weeks; they extended over several days.

Now, I am satisfied that there will be no cause for delay in the final completion of the ships owing to those changes, and I ought to explain that there were no changes made in the vessels building on the Pacific coast.

If Mr. Brown, the general purchasing officer, will permit me, I think I will introduce at this point some considerations regarding the supply of lumber which he furnished me, just to show you what the situation is and what the possibilities are in the construction of wooden vessels. There are 240 wooden vessels building on the Atlantic and Gulf coasts and 140 on the Pacific coast. The wooden ships required about 1,600,000 feet of lumber each, so that there was required for the vessels on the Atlantic coast 373,000,000 of southern pine. Orders have been placed at the mills in the South for 331,000,000 feet out of the 373,000,000 feet required, and out of the orders placed in the southern mills there have been shipped to the shipyards up to the present time 114,600,000 feet, or about 33 per cent of the total amount required.

The CHAIRMAN. Do you know when those orders were placed?

Admiral BOWLES. They have been placed, Senator, at various times; that is, our purchasing officers go in the field and place these schedules where they can with the mills, as the mills were able to take them up. So that the orders have been placed continually from the time this was started and are being placed now.

The CHAIRMAN. Beginning when?

Admiral BOWLES. Beginning when, Mr. Brown?

Mr. BROWN. About July, I think.

Admiral BOWLES. With regard to the vessels on the Pacific coast, the situation is this: There were required for the 141 vessels building upon the Pacific coast 239,000,000 feet of Douglas fir. We have not

exact information as to the supply of Douglas fir, but the orders already placed in the mills on the west coast amount to 148,000,000 feet out of the 239,000,000 required. According to the best information that we have, about 60,000,000 feet have been delivered, about 21 per cent.

Not obtaining the quantity of southern pine as fast as our program required and having great difficulty in getting the larger sizes, it was decided about a month or six weeks ago to place some orders for Douglas fir on the Pacific coast, and so 100 heavy units of fir have been placed in the Pacific coast, and the best information that we have is that a small portion of it is already on the way.

That is the situation with regard to the supply of lumber.

The CHAIRMAN. How does that come, by rail?

Admiral BOWLES. It comes by rail.

I want to explain to you what Mr. Brown has given me—that the estimated production of longleaf southern pine per year is about 6,000,000,000 feet. The lumber producers estimate that the portion of it that is suitable for the Ferris type of ship is about 5 per cent. So that the maximum production, if we took everything that was suitable for our ships, would be 300,000,000 feet a year. You will remember that I have told you that we had already ordered for these ships on the Atlantic coast 373,000,000 feet, or more than the possible production of the southern pine country for a year.

The CHAIRMAN. I understood you to say that you required 373,000,000 feet, but had ordered 333,000,000.

Admiral BOWLES. But we have ordered more than the possible production of the South for a whole year.

The CHAIRMAN. Can not that production be increased—I mean not by existing mills—but can not the production be increased?

Admiral BOWLES. I will tell you in one minute what we have done to try to get it all. These figures show that the maximum number of Ferris type vessels that can be built from this material per year is 230. Similar figures with regard to Douglas fir show that the maximum number of Ferris-type vessels which you can build from Douglas fir in one year amount to 140.

In regard to getting this lumber, Senator, we have not only placed orders with the mills and placed inspectors at the mills to inspect every piece that comes off the rack, but, finding that the mills were selling their lumber to builders of buildings and cantonments at higher prices than they had agreed to give us this lumber, and that we could not obtain the whole production that was suitable for us, an embargo was issued, and the embargo finally forbade anybody selling any lumber over 12 inches wide or over 2 inches thick, of any length at all, for any purpose, if it was available for ship timber. That embargo has been applied by our purchasing officers in the South to a very large number of mills, and authority was given to our representatives, if anybody disobeyed the embargo, to take over their mill and operate it for the United States. So that every possible means has been taken and all the power that we have has been exerted to secure this lumber. There has been an impression in my own mind as well as others that the southern producers had failed in what they had promised; and that is true. They overestimated what they could produce, because they promised us a supply of lum-

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ber in accordance with these schedules sufficient for our program. They never, however, reached one-half the maximum supply that we thought was necessary. But it seemed as if they had overestimated the possibility of doing themselves what they were able to do, and the situation on the west coast is practically similar, in that in order to obtain the supply of Douglas fir that is necessary for our vessels it has been necessary to introduce an embargo there also.

The CHAIRMAN. When was this last schedule issued, Admiral?

Admiral BOWLES. The last schedule was issued November 1; the revised schedule for the wooden ships.

Senator CALDER. What will be the effect of all this, Admiral?

Admiral BOWLES. The effect of all this will be considerable delay in the completion of the wooden ships. It has been stated here at this table that the changes that I made in the wooden ships had decreased their carrying capacity by 700 tons, which, of course, is absurd. I imagine that the decrease in carrying capacity of the ships might possibly reach 80 or 90 or 100 tons, but no more.

Senator NELSON. In the whole lot?

Admiral BOWLES. In the whole lot; and it probably in the majority of vessels is not over 50 or 60 tons.

Senator NELSON. The delay, if any, then, Admiral, has occurred from the lack of timber?

Admiral BOWLES. Substantially the whole delay has occurred from the lack of material.

Senator JONES. Admiral, most of the complaints I have had from the Pacific coast with reference to wooden ships has been that they could not get contracts to build the ships. I handed a telegram to one of your men here this morning from the Wright Shipbuilding Co., of Tacoma. They have ways and an organization they say for the building of ships, but my recollection now is they say they have only been able to get contracts for two.

Admiral BOWLES. Senator, in the face of the information I have given you, we are already attempting to build more than there is possibility of producing. Why give more orders and simply delay the whole business further?

Senator JONES. I think possibly these men may know a little bit more about the supply available than you do, because I do not think they would want to start on the building of these ships unless they had the supply or knew where they could get it. That is what I do not understand.

Admiral BOWLES. I hope they will get into the steel-shipbuilding business.

Senator JONES. I would like to see steel ships built too, but if we are going to build wooden ships I think we ought to build them as fast as the yards available can build them.

Admiral BOWLES. Anybody who can show that he controls a supply or has the materials will get a contract at once.

Senator JONES. I do not know what the showing is these people make; I know it is a responsible firm and I hope the organization will look into their proposition right away.

The CHAIRMAN. This change in the specifications called for an additional supply of lumber?

Admiral BOWLES. About 100,000 feet for each ship.

There is another feature of the wooden shipbuilding that ought to be explained. There is a popular idea that the man effort that goes into the wooden vessel is not available for the construction of steel ships. Now, you ought to understand, on the proposition of the wooden ship, that a whole lot of the man effort that goes into it is the iron and steel strappings, the engines and boilers, the smoke pipe and hatches and uptake, and in my judgment 90 per cent of the man power that goes into the construction of wooden vessels is taken away from and is available for the construction of steel ships. The only element of the man power that goes into the construction of wooden vessels that is not available for steel ships are those wooden-ship builders who will only work when they can stay at home.

Senator HARDING. The disposition has been to place wooden-ship contracts, has it not?

Admiral BOWLES. It has.

Senator NELSON. The supply of ship carpenters is quite limited, is it not? I use the word "ship carpenter" in its technical sense. They are limited in this country; there is a very limited supply, is there not?

Admiral BOWLES. The supply of shipyard workers is very limited, and shipwrights especially.

I think in justice to myself I ought to be at liberty to state that I had nothing whatever to do with the placing of any wooden-ship contracts. I have one other thing, however, to confess with regard to wooden vessels, and that is that I did interfere and make changes in the design of the machinery for them.

Senator JONES. Admiral, I do not know whether you are contemplating a further answer.

Admiral BOWLES. I was going to say that I did change the design of the engines and made modifications in the boilers.

The CHAIRMAN. When did you make those?

Admiral BOWLES. I did that very soon after I came in. The plans of the engines and boilers were nearly ready to go to the contractors and the contracts had been placed, and I made from a month's to two months' delay in the completion of those things, because it seemed to me to be absolutely necessary that if we were going to build 400 vessels and 400 engines and some 800 boilers that they should be creditable as an American design in every way, and the changes were made for that purpose.

The CHAIRMAN. Could you give us the changes and the reasons for them?

Admiral BOWLES. I could give you a long list of changes.

The CHAIRMAN. I mean simply in a general way.

Admiral BOWLES. The design and the reciprocating engine that was going into those vessels was inferior, and its principal defect was that it was unbalanced and would cause vibration, particularly detrimental to a wooden vessel. The crank shaft was a continuous crank shaft, and in a wooden vessel the danger of breaking a crank shaft is much greater than in any other vessel, and I thought it ought to be sectional, so that if it did break it could be easily replaced and spares more easily carried in store. There were many other detailed questions in regard to the arrangement of the valves which affected the economy of the engine. The engine we finally adopted is a far more economic engine for steam than the one that was planned.

The boiler—the changes were more or less ones of detail for permitting better construction and a less number of individual thicknesses of tubes and plates and one thing and another, and details which added to the safety of the boiler in use.

The CHAIRMAN. Were there any changes in the contractors?

Admiral BOWLES. There was no change in the contractors that I know of.

The CHAIRMAN. Who are the contractors?

Admiral BOWLES. There is a large number. Mr. Brown can furnish you a list of the contractors for the engines and boilers. They extend all over the country.

The CHAIRMAN. Will the engines and boilers be ready by the time the hulls are ready?

Admiral BOWLES. I think they will.

The CHAIRMAN. So there will be no delay, you mean to say, in the completion of the vessels by reason of the delay in the completion of the boilers and engines?

Admiral BOWLES. There might be one or two ships delayed, but on the whole there will be no delay at all.

The CHAIRMAN. Were there any other changes in the designs or specifications?

Admiral BOWLES. None, that I remember; except those that refer to the military requirements. Of course, these military requirements have arisen since the original design was prepared, and we have had to make quite a number of changes in the quarters and crew and arrangements for magazine and the mounting of guns and those things which necessarily had to be changed.

The CHAIRMAN. Would that involve delay to contractors or builders?

Admiral BOWLES. A little delay; yes; but those were all things that are in the final completion of the ship.

The CHAIRMAN. Were there any changes in the designs and plans and specifications of the steel ships?

Admiral BOWLES. There have been changes relating to these war zones and military requirements, and there have been changes in regard to visibility; that is, we have cut down the smoke pipes and taken down the masts and made the derricks portable, and such things as that, that is all.

The CHAIRMAN. Do you know of any instances where contracts have been let and the construction of the ship begun, when contractors were advised that it was determined to give a different shape to portions of the structure?

Admiral BOWLES. Yes; I know of one such case.

The CHAIRMAN. That did not apply generally?

Admiral BOWLES. Well, I know that case very well. I can tell you all about it.

The CHAIRMAN. There were no permanent changes of the design and specifications as to the steel ships made after they were originally promulgated?

Admiral BOWLES. I do not think of any. But I know this particular case; I can tell you why that was.

Senator HARDING. Let us have it.

Admiral BOWLES. This was a case of Merill-Stevens. They were under contract to build a vessel which was to be paid for by the dead-

weight ton; and she was also to make a certain speed; but, as I remember it, there was no penalty on the speed. The specifications required that the lines should be approved by us. Now, they went ahead with their work without submitting those lines at a proper time, and when we did get them and tried the vessel in the model basin here in Washington, we found that the speed was going to be very deficient and that they had filled that ship out in order to give more dead-weight tons in her, and therefore get more money, in a way that would have nearly ruined the ship, and I, of course, gave orders to change it. And then they complained that I was making delay, and I told them that there would be no delay if they got busy and accepted my decision, which was certainly absolutely right, and I have not heard from them since. They made the changes.

The CHAIRMAN. I do not think it is quite just to say that they were doing this in order to increase the dead-weight tonnage and so get more money out of the Government, and were not trying to build a proper ship. I rather think you are assigning motives to them that are not quite just.

Admiral BOWLES. If so, I am very sorry; but that is what showed on the face of the returns.

The CHAIRMAN. They were building according to some plan, were they not?

Admiral BOWLES. They were building according to a general plan, but this was one of the things that they had to develop for themselves, the actual line.

The CHAIRMAN. That is an old established yard, and they have had a good deal of experience before. I know these people as honorable, capable contractors.

I did not bring that matter up because of any complaint by them, I was simply asking for information as to whether or not there had been changes. You mentioned changes as to the wooden ships, and I wanted to inquire as to the steel ships.

Admiral BOWLES. Now, Mr. Chairman. I have been authorized by the chairman of the Shipping Board to tell you what is being done in regard to housing.

Senator JONES. One moment before you go into that. As I understood, you suggested awhile ago that in a locality where steel-ship construction was possible—that is, the further development of it possible—you would discourage wooden-ship building. Was that a correct understanding of what you said?

Admiral BOWLES. No; that was not the way I put it.

Senator JONES. Well, I will ask you whether or not you think it wise from a governmental standpoint, in a locality where further steel-ship development is possible, to hold back or prevent wooden-ship building in order to encourage steel-ship building?

Admiral BOWLES. I do.

Senator JONES. And that would be a policy you think wise from the governmental standpoint in the present condition of things?

Admiral BOWLES. Absolutely.

Senator JONES. And if you have the say that will be the policy that will be followed?

Admiral BOWLES. If I had the say it would.

Senator HARDING. Before you go into the housing question you have a good deal to do with the type of ship to be erected, I take it?

Admiral BOWLES. The technical department in which the designs are prepared comes under me, and I have influenced the designs in many ways.

Senator HARDING. I want to ask you, have you ever given any consideration to a proposition to build the cast-iron steel ship?

Admiral BOWLES. I gave very brief consideration to it.

Senator HARDING. Did you think it utterly unworthy?

Admiral BOWLES. I did not think it practicable.

Senator HARDING. Have you not already established the system of electric welding and putting these parts together in a manner to prove effective?

Admiral BOWLES. Not at present. There are experiments going on in this country to-day for the development of spot riveting—that is, of securing plates together without rivets by means of electric welding. There are also experiments going on in regard to butt welding, which is welding butts together instead of riveting them with butt straps. Both of those things, if they could be accomplished, would be of enormous assistance in the construction of ships. But so far they are in an experimental stage. I have been in consultation with the people who are carrying on those experiments quite recently.

Senator HARDING. Well, this proposition came to the Emergency Fleet way last spring, did it not?

Admiral BOWLES. It did.

Senator HARDING. And you think it unworthy?

Admiral BOWLES. In the shape I saw it, it was unworthy then. I understand that some developments have been made in the design, and I believe yesterday I promised somebody to go over it again. I saw it first some time in September.

Senator HARDING. But it has had no serious attention up to this time?

Admiral BOWLES. I think not.

Senator HARDING. It would, if practical, effect a very great saving in construction, would it not?

Admiral BOWLES. Well, whether this development of the electric welding would make greater speed when used in connection with cast steel than when used with wrought steel I have very serious doubts; that is, if the electric welding was possible, and thereby make the cast-steel ship a possibility, whether it would be superior to the other ship I have very grave doubts.

Senator HARDING. You are going into that again now, you say?

Admiral BOWLES. I did promise to do so.

Senator HARDING. Let me ask you another question. Do you know anything about a proposition to build steel ships on the part of the Texas Steel Co.?

Admiral BOWLES. Not the Texas Steel Co.; the Texas Steamship Co., I do.

Senator HARDING. Perhaps I have the name wrong. Why were they never given any consideration?

Admiral BOWLES. I think from what you say it is some other company that I do not know. I do not know the Texas Steel

Co.; I only remember something that might have that name that was connected with the production of steel. Is that it?

Senator HARDING. Well, they claim to be not only producers of steel and all that, but they thought to go into the shipbuilding business, and claimed to have proposed to the Government to build ships at $140 a deadweight ton.

Admiral BOWLES. Yes; so they did. It was a wild idea of getting the Government to advance sufficient money to develop an ore supply, to construct blast furnaces and the rolling mills——

Senator HARDING. Oh, it was entirely a dream from the beginning, you mean?

Admiral BOWLES. Well, it looks like one to me, because it seemed to me that for us, who were engaged in producing things in an emergency, it was not of a character that we ought to give attention to.

Senator HARDING. They had no plant of any kind?

Admiral BOWLES. Absolutely nothing but a scheme.

Senator HARDING. You need not answer any further.

Senator NELSON. Did they not even have the ore lands? Did they have iron mines?

Admiral BOWLES. They had a very poor quality of ore supply under some sort of option or other. As far as I could make out they had nothing at all.

Senator NELSON. If you should adopt their scheme, I would expect you to come to Minnesota, because we have good iron mines.

Admiral BOWLES. This scheme came to me indirectly. They had been before the Council of National Defense, who had rejected it, and it was sent to me, I think by Mr. Hurley, to prepare a letter.

The CHAIRMAN. They claim to have the ore and the facilities and to be able to manufacture their own steel and build the ships.

Admiral BOWLES. All of which they would do if we supplied the money.

Senator JONES. Have you the letter? I suppose every member of the committee has a letter in reference to the matter from an attorney in this town.

The CHAIRMAN. I had a letter, yes; and I thought I had it here. The first contracts let were for wooden ships?

Admiral BOWLES. I believe they were.

The CHAIRMAN. And then later you began letting contracts for steel ships. Have you had any delays on account of inadequate material for the steel ships?

Admiral BOWLES. Yes; we have had some slight delay.

The CHAIRMAN. And the same way as to the composite ships?

Admiral BOWLES. The composite ships, as far as I know, we have had no delay with.

The CHAIRMAN. What do you think of the composite ships?

Admiral BOWLES. Well, I think anybody that can build a composite ship can build a steel one, and therefore I urge any builder that promises a vessel to take up steel construction. I think the situation with regard to the construction of various types of ships ought to be thoroughly understood. What we are trying to do is to put upon the ocean as quickly as possible the greatest amount of

tonnage. Now, the experience we already have shows that it actually takes more time to construct a wooden vessel, a wooden steamer, than it does to construct a steel vessel, of very much larger capacity. And therefore it is not good policy to construct a wooden vessel, except in places where the supply of material and labor adapt itself only to that purpose.

The CHAIRMAN. What yards or builders have complained about the lack of supply of steel delaying their work?

Admiral BOWLES. The Union Iron Works complain; the Great Lakes Engineering Co.; the American Shipbuilding Co.; the Downey Shipbuilding Co., in New York. I have a list of them, but I do not remember any more at this moment. What we are doing at the present time is having a report made every week from every shipyard, as to what they receive in the way of steel, what they need and what their production requires, in order that we may distribute the supply of steel.

The CHAIRMAN. Do you apprehend that you will be able to increase the supply of steel in order to meet the requirements, or will those delays necessarily continue?

Admiral BOWLES. I think those delays have now all been met; but of course there is a limit beyond which we can not go at present in the construction of vessels by the steel capacity of the United States.

The CHAIRMAN. Will you not likely have the same trouble with steel that you had with timber?

Admiral BOWLES. I can explain to you how that limit is if you would like to have me.

The CHAIRMAN. Yes.

Admiral BOWLES. And this I do through information that has been furnished to me by our general purchasing agent. The total capacity of ship plates during the year 1918 will be approximately 2,684,000 tons. Now, the portion of that which is available for ship plates on our present designs is about 1,790,000 tons. After we deduct from that what the Navy will require it is estimated that the balance, if it were all given to shipbuilding, would enable us to produce in one year about 7,100,000 tons. So that the maximum production of steel ships in the United States in 1918, if all the available supply of plates were directed to that purpose, would be 7,100,000 tons.

The CHAIRMAN. So it would seem that the capacity then would supply your needs.

Admiral BOWLES. At present, yes.

The CHAIRMAN. At present, yes.

Admiral BOWLES. Of course at the present time a very large proportion of plates which are available for shipbuilding is going into the construction of buildings and cars and various commercial activities, so that——

Senator NELSON. Have you taken any steps to commandeer the steel industries with respect to this?

Admiral BOWLES. So far we have only had to threaten.

Senator NELSON. And have they responded to threats?

Admiral BOWLES. They have.

The CHAIRMAN. Do you know how many ways the Merchant Ship Company has?

Admiral BOWLES. Nine.

The CHAIRMAN. And how many do they propose to build?

Admiral BOWLES. They have a contract for 40 ships.

The CHAIRMAN. They need about 20 ways, then?

Admiral BOWLES. Well, I don't remember how many ways they are to have.

The CHAIRMAN. And the Submarine Boat Company?

Admiral BOWLES. The Submarine Boat Company are to have about 28 ways, and they have a contract for 150 ships.

Senator NELSON. I spoke to you a while ago asking you to explain something of a certain class of ship you were furnishing. Do you remember?

Admiral BOWLES. Yes; I would be glad to explain the difference between the fabricated vessels and the vessels of ordinary construction. In the ordinary construction of vessels the plates and shapes are delivered in the shipyard as they come from the mill. The vessel having been laid down in the mold loft the templates are made and the frames of the vessel are bent and adjusted to these templates and so prepared for erection on the building slip. The plates of the vessel are templated in the mold loft and are then sheared in the shops; their edges and butts planed and the rivet holes laid off from the actual template and punched under the individual punching machine in the shipyard and then erected, placed and riveted. Now, in the fabricated ship the design has been made to eliminate curvature wherever possible: that is, throughout the length of the ship a uniform section is maintained as long as possible. The sides of the ship are substantially flat, the bottom is flat, the curvature on the bilge is made as short as possible.

The ship has no shear; that is, she does not rise forward and aft; the deck has no crown, it is flat. By this means it is possible after the ship is laid down in the mold loft to take the templates to structural shops accustomed to fabricating steel for the construction of buildings or bridges, and there to punch all the rivet holes in the plates and shapes, and to template them in portions that are as large as can be transported by a railway car, all riveted together. So that when this material comes to the shipyard it comes in pieces that are ready to be installed in the ship and only require riveting where connections are made to the adjoining piece. By this means there is utilized the skill of the workers in the fabricating shops of the bridge builders and their machinery, and thereby an additional class of labor can be employed, and the structure of the ship is simplified and the speed of construction should be materially increased. Now, this process of fabricating ships is one that has gradually grown and developed in the minds of the people of this country for four or five years. I do not know that anyone can claim to be its originator, but many people have been thinking of it, and when this emergency arose it offered the opportunity to put it in practice, and so far as I know there are no fabricated ships building anywhere except those in the United States. I am certain that there are none building in Great Britain.

Senator NELSON. Do you regard them to be as substantially built in that way as when built in the old way?

Admiral BOWLES. I do; and I regard these fabricating processes in these contracts as the great, inspiring thing of the program that we have undertaken. That is a general view of the layout of the Newark Shipyard of the Submarine Boat Corporation (exhibiting photograph), where they are undertaking to build 150 vessels.

The CHAIRMAN. If there is nothing further at this time, the committee will now adjourn.

(Thereupon at 12.55 o'clock p. m. the committee adjourned to meet at 2 o'clock p. m. to-morrow, Friday, December 28, 1917.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, DECEMBER 28, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Martin, Bankhead, Kirby, Nelson, Jones, Sherman, Harding, and Johnson.

The CHAIRMAN. I have here a communication from the chairman of the Shipping Board in response to a portion of question No. 1 of the questions submitted by the committee, which was suggested by Senator Jones; and I think the communication can go in the record at this point [handing letter to Senator Jones].

Senator JONES. I think it ought to go in, Mr. Chairman, but I have not had an opportunity to examine it to see whether it fully answers the question.

The CHAIRMAN. Well, it can go in at this time for whatever information it contains and we can examine it later.

(The communication referred to is here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
Washington, December 26, 1917.

Hon. DUNCAN U. FLETCHER,
Chairman Committee on Commerce,
United States Senate, Washington, D. C.

MY DEAR SENATOR: Responding to that portion of question No. 1, submitted by the committee and suggested by Senator Jones, regarding the organization of shipyards, I have the honor to advise you that from the information compiled in the division of shipyard plants of the Emergency Fleet Corporation, there are at the present time a total of 113 shipyard plants that will handle 146 contracts and execute to date. This number consists of old yards, old yards expanded on account of new contracts for the Emergency Fleet Corporation, and new yards constructed since the organization of the Emergency Fleet Corporation.

The total is made up as follows: 23 old yards, 16 old yards expanded on account of Emergency Fleet Corporation contracts, 74 new yards.

The following new shipyard plants have been and are expected to be assisted by the Emergency Fleet Corporation funds:

Contract No.	Name.	Contract No.	Name.
	Steel vessel plants.		*Steel vessel plants*—Continued.
26	Baltimore Dry-dock & Shipbuilding Co.	99	Bayles Shipyard (Inc.).
30	Dewney Shipbuilding Co.	101–140	American Shipbuilding Co. (6 plants).
91	Newburg Shipyards (Inc.).	141	Southern Shipbuilding Corporation.
92	Los Angeles Shipbuilding & Dry-dock Co.	142	Pacific Construction Shipbuilding Co.
97	Oscar Daniels Co.	144	Pensacola Shipbuilding Co.
		146	The Atlantic Corporation.

Contract No.	Name.	Contract No.	Name.
	Fabricating plants.		*Wood vessel plants*—Continued.
83	American International Corporation.	24	American Shipbuilding Co., Brunswick, Ga.
86	Submarine Boat Corporation.	27	Tampa Dry-dock Co.
87	Merchant Shipbuilding Corporation.	28	Union Bridge & Construction Co.
	Composite plants.	29	Jahncke Shipbuilding Co.
31	Supple & Ballin.	34	Grant Smith-Porter-Guthrie Co.
44	Kelly-Atkinson Construction Co.	40	Do.
	Wood vessel plants.	43	Potomac Shipbuilding Co.
5	Peninsula Shipbuilding Co.	45	J. N. McCammon.
11	Sanderson & Porter.	47	Alabama Dry-dock & Shipbuilding Co
12	Maryland Shipbuilding Co.	53	J. M. Murdock.
14	The Foundation Co.	54	Mid and Bridge Co.
22	Newcomb Lifeboat Co.	55	United States Maritime Corporation.
23	Traylor Shipbuilding Co.	60	J. H. Mendell Engineering & Construction Co.
		73	Housatonic Shipbuilding Co.

NOTE.—The six plants of the American Shipbuilding Co. have been included in the above as a 10 per cent cash payment on signing of the contracts.

The following is a statement prepared by the auditing division showing the names of the shipyards which have been given financial assistance by the Emergency Fleet Corporation to date, according to districts:

District.		Plant and property.
No. 1.	Sandy Point Shipbuilding Co	$25, 000. 00
	L. H. Shattuck (Inc.)	305, 740. 23
No. 2.	Foundation Co	579. 085. 26
	Housatonic Shipbuilding Co	167, 227. 02
	Traylor Engineering & Machinery Co	588, 282. 43
No. 3.	Maryland Shipbuilding Co	46, 123. 24
	Potomac Shipbuilding Co	166. 037. 04
No. 4.	American Shipbuilding Co	24, 000. 00
	Hillyer, Sperring Dunn Co	57, 577. 14
	J. M. Murdock	63, 434. 85
	Tampa Dock Co	18, 000. 00
No. 5.	Alabama Dry Dock & Shipbuilding Co	54, 777. 46
	Jahncke Shipbuilding Co	291, 350. 83
No. 6.	Midland Bridge Co	132, 191. 01
	Union Bridge & Construction Co	183, 944. 13
No. 8.	Grant, Smith, Porter, Guthrie Co., St. Johns, Oreg	344, 952. 48
	Grant, Smith, Porter, Guthrie Co., Aberdeen, Wash	32, 567. 28
	Sanderson & Porter	345, 427. 96
Fabricated—Shipyards:		
	American International Shipbuilding Co	3, 347, 706. 27
	Merchant's Shipbuilding Co	1, 870, 367. 84
	Submarine Boat Corporation	894, 907. 81
	Total all districts	9, 538, 686. 28

Respectfully submitted.

EDWARD N. HURLEY,
Chairman.

The CHAIRMAN (continuing). We will now go on with Admiral Bowles; but before we go into executive session I should like to make a few inquiries.

In the newspapers, commenting on the hearing of yesterday, Admiral Bowles, there are such headings as these: "Wooden fleet flat failure;" "Wooden-ship program is failure." Did you mean to go as far as that in the views you expressed on that subject.

Admiral BOWLES. Well, I was sorry to see those headings, Mr. Chairman, and I considered them an entire misconception of the statements that I made.

The CHAIRMAN. I did not think you meant to give that impression

Admiral BOWLES. I explained pretty thoroughly the limitations of the wooden-ship building program and the difficulties of it and the possible reduction of wooden vessels, but so far as I am aware I expressed no opinion on the merits of a controversy which I think it unnecessary to revive.

The CHAIRMAN. Well, Admiral, will you state concretely and as briefly as you can what criticism you have to offer as to the wooden-ship program?

Admiral BOWLES. Well, Mr. Chairman, that is rather a long story, and would it not be sufficient if I put the answer in a constructive way as to what part I think the wooden-ship program should play in this emergency——

The CHAIRMAN. Do just as you like about that.

Admiral BOWLES. And what part it can efficiently play?

My feeling, of course, is that we are dealing with an emergency in which any vessel capable of ocean service which can be produced should be produced, and that speed and rapidity of construction is of the first importance, and that the usual standards of what is most economical or what is most efficient should, in large measure, give way to the feature of emergency and the greatest possible production of tonnage within a limited time.

As to the best solution of that problem, my feeling is that it will best be solved and the emergency be met most quickly by the largest effort being put into the construction of steel vessels, and that the wooden vessels should be built only in such places and in such numbers where the production of tonnage can be increased most rapidly by that means.

Now, while that answer is not as definite as I would like to make it, I think it is fair for me to state that the inference from it is that we have attempted to produce, within a limited time and under very unusual conditions, more wooden tonnage than we should have attempted, and that having done so, it will somewhat retard the maximum production of tonnage over a limited period.

It will, however, have some advantage in having directed a great many people toward the building of shipyards who probably would not otherwise have done so; and I believe that the minds of those people are now rapidly turning toward the construction of steel vessels; and the fact that they are educating themselves and their men upon the production of these vessels will serve a good purpose in the future, by bringing about a greater production of steel vessels.

That seems to me to be a complete answer to your question, Mr. Chairman. When you have your executive session of the committee, I shall show you that there is a probability of a very large item in our tonnage consisting of wooden vessels.

The CHAIRMAN. Are we to understand that, if you had the matter to go over again, your view would be that you would not have had as many contracts for wooden vessels as were let?

Admiral BOWLES. That is true.

The CHAIRMAN. And that would mean that, in your judgment, by limiting the contracts and the quantity of output of ships, you would have had completed ships more quickly, although you might not have as many as you would have had if you had let more contracts?

Admiral BOWLES. Precisely.

The CHAIRMAN. That was the impression I had from your discussion of the subject yesterday. And that conclusion is, perhaps, based on the fact that there has been a difficultv in getting an adequate supply of material. And there is also a lack of material as to the steel ships; would you in like manner limit the number of contracts for steel ships?

Admiral BOWLES. There is an absolute limit on the production of steel vessels in the United States, and it would be folly to let steel contracts in excess of the possible production.

The CHAIRMAN. You are still, however, open to letting contracts both for wood and for steel ships, I presume, with reference to contracts for future deliveries. May I ask if you have adopted any time within which you specify that vessels shall be completed? How far ahead are you willing to make contracts for deliveries?

Admiral BOWLES. Well, I think, Mr. Chairman, that I would prefer not to answer that in open session; it is an important feature in dealing with our war situation. But I shall be very glad to answer it in executive session.

The CHAIRMAN. Very well, we will pass that for the present. The question just occurred to me, and I did not want it overlooked altogether.

STATEMENT OF ADMIRAL F. T. BOWLES, MANAGER DIVISION OF STEEL-SHIP CONSTRUCTION, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—Resumed.

In looking over the recommendations of Mr. Charles M. Englis to the Fleet Corporation, I find that one of them, for example, is as follows [reading]:

> A futtock on the amidships frame can not be molded under 28 to 30 inches in width, allowing 16 inches as the width of the frame. I would suggest that a latitude be given whereby if the futtock has at least 8 inches on each end of the crook of solid wood that this difficulty may be avoided. The material could then be molded from 26 to 28 inch material, whereas at the present time it takes from 28 to 30 inches.

Did you act on that recommendation at all?

Admiral BOWLES. I do not think any general instructions were issued on it. I considered it a matter of detail which any shipbuilder could deal with; and my whole object in sending Mr. Englis to visit the yards on the coast was that, being a very experienced man, he would give good advice in regard to details.

The CHAIRMAN. It would make a difference, however, in getting material, whether the mill had to furnish 28 by 30 inch instead of 26 by 28 inch material, would it not?

Admiral BOWLES. Yes; it would make a material difference. But we are now getting pretty much all of those futtocks from the cypress mills, and they are having no difficulty in producing them. It is, however, practically impossible to get them of the width that we require in yellow pine.

The CHAIRMAN. Now, let me understand, Admiral, if I can, what the Government is investing in the plant at Hog Island, to be operated through the agency of the American International Corporation.

Admiral BOWLES. The estimated cost of the shipyard is $27,000,000.

The CHAIRMAN. Then, what is the investment at the plant that the Merchants Shipbuilding Co. is to operate?

Admiral BOWLES. The plant of the Merchants Co.—at the present time the estimate is $6,700,000.

The CHAIRMAN. And that is located where?

Admiral BOWLES. That is at Bristol, Pa.

The CHAIRMAN. The Merchants Co.'s plant is at Bristol, and the American International plant is at what place?

Admiral BOWLES. The American International plant is at Hog Island.

The CHAIRMAN. What are the figures as to the plant of the Submarine Boat Co.?

Admiral BOWLES. The Submarine Boat Co.—their present estimated cost is $8,636,000. None of these figures that I have given includes housing facilities, which will probably have to be added; in fact, I know they will have to be added in two of them.

The CHAIRMAN. Have you any idea what that will cost?

Admiral BOWLES. I think that the estimate for the housing facilities for the Merchants Co. is $6,000,000; but in all probability it will not be necessary to expend half of that. The amount to be expended at the American International plant at Hog Island is $10,000,000.

The CHAIRMAN. And the housing facilities for the Submarine Co.?

Admiral BOWLES. The Submarine has not called for any housing as yet.

The CHAIRMAN. The figures you have just given would mean a total investment exceeding $58,000,000; and that entire investment would be in plants within a radius of 100 miles, would it not?

Admiral BOWLES. Yes; the two places—the Bristol and the Hog Island places—are within 50 miles of each other.

The CHAIRMAN. From the standpoint of emergency, not with reference to any general policy, but in view of the fact that private yards have all the work they can do and if they are in need of any work the Government would be ready to give it to them, do you not believe that the Government could have undertaken the construction of these ships in a yard of its own, costing less than this $57,000,000, at an immense saving in the cost of the ships and also in the speed of the work?

Admiral BOWLES. When you speak of the Government, Senator, I presume you speak of the Emergency Fleet Corporation?

The CHAIRMAN. Precisely.

Admiral BOWLES. And I would answer decidedly not. I don't think that, with the people we have available and with their experience, we could expect to do in such short time what these organizations that have been brought together for this purpose can accomplish. I feel that we are deliberately expending a great deal of money in these plans for the purposes of dispatch, expedition—the completion of these vessels. Now, that may be looked upon as waste or extravagance: but it is a necessary element of haste.

Senator NELSON. Right there, may I interrupt you? Has this big shipbuilding company at Hog Island laid the keel of any ship yet?

Admiral BOWLES. No.

Senator NELSON. Then, where does the expediting come in in that case; when do you expect to get a ship from that yard?

Admiral BOWLES. Starting with an open field, within the last 10 weeks they have organized a force of 17,000 men for the building of their shipyard.

Senator JOHNSON. Which company, please?

Admiral BOWLES. The American International at Hog Island. The Submarine Boat Co. has laid a keel.

Senator NELSON. That is an existing company?

Admiral BOWLES. No; this is one of these fabricating companies.

Senator NELSON. I mean were these companies formed especially for the purpose of taking those contracts?

Admiral BOWLES. The Submarine Boat Corporation had no shipyard. They had a great many people in their employ who had had experience in connection with vessels; but no shipyard.

The CHAIRMAN. How about the Merchants?

Admiral BOWLES. The Merchants' people had been the first to attempt the construction of fabricated ships in their Chester shipyard; and the conception of the organizing of that yard for this purpose originated there.

The CHAIRMAN. Now, I understood yesterday, Admiral, in answer to a question from Senator Johnson, that the American International was to get approximately $6,000,000 for its work in the building of these ships at Hog Island, and that the consideration for that was their organization and the "know-how," as you expressed it. Now, it developed a little that their organization was that of the New York Shipbuilding Co., and that they had already all the work they could do and, consequently, all that force was needed at that plant in New Jersey. Consequently, about all that is being furnished by the International Co. at Hog Island is the "know-how," and what is in my mind is, How can they be superior to you in supplying the "know-how?" You will not concede that they know better how to build ships than you do?

Admiral BOWLES. Perhaps I did not make it clear, Senator. The portion of the "know-how" that is furnished by the New York Shipbuilding Co. is a very small portion of the work of this International Co. That portion is, in fact, along the lines of the engineering of the vessels themselves and the drafting work of the plans of the vessels. Now, the part that the organization of the American International is doing at this moment, of course, is wholly in the construction of the shipyard, which is a problem entirely apart from the construction of the ships themselves after the layout is once made.

Senator NELSON. May I interrupt you there? When do you expect to have that shipyard completed, so that they can start building ships?

Admiral BOWLES. I should think that the shipbuilding there will not become what you might call active and under good headway until May or June.

Senator JOHNSON. Admiral, who furnished or approved the plans for the construction of the shipyard? I am not speaking individu-

ally, but the men—was it from your corporation or was it from the shipyard, or was it from the private corporation?

Admiral BOWLES. They presented a general layout of the shipyard.

Senator JOHNSON. But before they commenced construction it had to be approved, did it not, by you or by your particular board?

Admiral BOWLES. I think it did.

Senator JOHNSON. So that there could be no construction of a shipyard by the International Co. without first the approval of the Government, as it were, getting through?

Admiral BOWLES. Yes; that is true.

The CHAIRMAN. Do you have inspectors on the work all the time to see that it is done right?

Admiral BOWLES. Yes; we have a complete force of inspectors and auditors.

The CHAIRMAN. And in the case of all these ships that are building you have inspectors?

Admiral BOWLES. On every contract.

The CHAIRMAN. So that the Government is actually doing a very considerable part of that work, in addition to furnishing all the money?

Admiral BOWLES. The shipbuilders do not think so.

The CHAIRMAN. Do you not think that if the Government had undertaken this work the Merchant Fleet Corporation is doing you would have had less difficulty about labor—you would have been able to get a force and use the same force that you now use in supervising, etc.; and, if necessary, men could have been recruited for that service, could they not?

Admiral BOWLES. Well, supposing we had the job to do, and supposing I had to create this shipyard for the Government; I would have gone to one of these great organizations to build that plant; I would have divided it up among these people, and those people that were capable of doing the individual parts; I would not have attempted to have employed the individual men and appointed the necessary superintendents and have taken charge of that work myself—that would have been absurd. I should have employed every agency that was capable of doing a portion of the work in the United States to accomplish it in the least possible time. That is what we employed these people to do.

Senator JOHNSON. When was it that they got together their organization, if you please?

Admiral BOWLES. They started a long time prior to the signing of the contract, Senator. I could not say exactly when.

Senator JOHNSON. And the contract was signed approximately when?

Admiral BOWLES. About the 13th of September. They submitted to us their first list of salaried executive force on November 23, and I was going to explain, in answer to your request, that I was unable to supply the complete list to-day because since this list was approved on November 23 they have applied for a considerable number of additions to it, and those additions have not been passed upon. I learned yesterday that a complete list would be before us next Monday, and after we have had an opportunity to go over it it will be submitted to you complete.

Senator JOHNSON. They got together their organization, however, in contemplation of these contracts, for the very work we are talking about, did they not?

Admiral BOWLES. Exactly.

Senator JOHNSON. They had no such organization prior to the time you began to negotiate with them that would have enabled them to carry out the contract, had they?

Admiral BOWLES. They had through Stone and Webster a very large number of people under their employment who have been engaged upon similar work.

Senator JOHNSON. Where? Where did Stone and Webster have these people under their employ on similar work?

Admiral BOWLES. I only remember at this moment that they built one of the cantonments. I could not begin to give you a list of their activities, but they have been engaged in work for public-service corporations throughout the United States, power equipment, and that sort of thing.

Senator JOHNSON. The point was this—and it is not in any criticism at all. The point is that the companies were formed for the purpose of doing this specific work; that is correct, is it not?

Admiral BOWLES. Yes, sir.

Senator JOHNSON. The thought has occurred, as suggested by the chairman, that possibly that organization might be gotten together by you people instead of by the private corporation. I take it, Mr. Chairman, that that was the idea in your mind, was it?

The CHAIRMAN. It was; yes.

Senator JOHNSON. Yes. Now, when these organizations were gotten together by the International Co. and only within the past three months, as I understand——

Admiral BOWLES. Yes.

Senator JOHNSON. Then they began to work upon certain plans that had to be approved by you before they could undertake any work in the construction of the yards?

Admiral BOWLES. Yes, sir.

Senator JOHNSON. Now, with your plans, then they began to construct a United States Shipyard, as it were, did they not?

Admiral BOWLES. Well, they made those plans themselves after consultation with us.

Senator JOHNSON. That is, they submitted plans to you, but the plans had to conform to your ideas?

Admiral BOWLES. Yes.

Senator JOHNSON. They commenced this construction in the fashion indicated, wholly paid for by you?

Admiral BOWLES. Yes.

Senator JOHNSON. They employed men in their organization wholly paid for by you?

Admiral BOWLES. Yes.

Senator JOHNSON. They are constructing ships under the plans and specifications that have been accorded them by you, all of the labor of which is paid for by you?

Admiral BOWLES. Yes.

Senator JOHNSON. They are constructing from materials furnished substantially by the Government, are they not?

Admiral BOWLES. In large measure.

Senator JOHNSON. Let us take, for instance, the steel that is used in the construction of these ships. How is that ordered?

Admiral BOWLES. The proposition is this: They contract with various fabricating companies for the fabrication of the steelwork. Those fabricating companies prepare their own schedules of material. Those orders are placed by our purchasing agent with the mills.

Senator JOHNSON. So that, in fact, you pay for and you furnish the material in the fashion you indicate?

Admiral BOWLES. We pay for it through them. That is, they are responsible for the receipt of the material and for the presentation of the bills to us. Our part of it is the allotment and distribution of the orders in order to secure delivery.

Senator JOHNSON. Now, prior to the time that your commenced construction upon the particular land, was any shipyard there constructed at all?

Admiral BOWLES. I believe not; but I have nothing whatever to do with that.

Senator JOHNSON. Can you tell me what proportion of wooden ships you contracted for prior to the 1st day of August and what subsequently? I mean only approximately, not exactly.

Admiral BOWLES. I should say that four-fifths of them were prior to that time.

Senator JOHNSON. Four-fifths were prior to the 1st day of August?

Admiral BOWLES. Well, no; that is too many, perhaps. If I should say that they were contracted for or that we were committed to the contracts, I think four-fifths would be about correct.

Senator JOHNSON. And about one-fifth since that time?

Admiral BOWLES. Yes.

Senator JOHNSON. I was endeavoring to follow the questions that were asked by the chairman and your responses, because I was not here yesterday when that particular matter was brought out. Do I correctly understand you to say that the wooden-ship program is one that you would not have entered upon originally if you had the choice?

Admiral BOWLES. I said not to such a great extent.

Senator JOHNSON. But you would have entered upon it to some extent?

Admiral BOWLES. Yes.

Senator JOHNSON. Now, take the western shipyards that are devoted to the building of wooden ships; you would let them continue in that, would you not?

Admiral BOWLES. I certainly should.

Senator JOHNSON. And contract with them in the future just as in the past?

Admiral BOWLES. Provided that it was not interfering with other work.

Senator JOHNSON. That is, the construction of steel ships?

Admiral BOWLES. Yes.

Senator JOHNSON. The precedence would be given by you to the construction of steel ships, as I understand?

Admiral BOWLES. Absolutely.

Senator JOHNSON. But by no means would you neglect the opportunity to build wooden ships?

Admiral BOWLES. I would not.

Nobody has asked me what my duties were in the Fleet Corporation, and I would be glad of an opportunity to state.

Senator JOHNSON. Will you state, please, Admiral, what your duties are in the Fleet Corporation? That will give you the opportunity.

Senator NELSON. I think from your qualifications, Admiral, you are too modest. You ought to perform the duties that Gen. Goethals and Admiral Capps performed.

Admiral BOWLES. I came into the Fleet Corporation as an assistant to Admiral Capps, and he assigned me as manager of the division of construction. The division of construction took up the contracts after they had been executed, and dealt with all the questions arising under the contracts. Now, for that purpose this division of construction was organized into a technical department, with a naval architect and consulting engineer at its head, and with draftsmen, both hull and machinery; there was also a commandeering department, which had charge of everything relating to the requisitioned vessels building in the private yards. Also a department called inspection and production, which had cognizance of everything relating to the inspection of vessels building, and when this division was organized it included both steel and wooden vessels. In addition to that, there was a department organized called that of industrial service, which I conceived to be a constructive-labor job.

Senator NELSON. Let me interrupt you just there, Admiral. Was this distribution and organization effected after you became connected with the corporation?

Admiral BOWLES. It was.

Senator NELSON. There was nothing of the kind before that?

Admiral BOWLES. Nothing.

Senator NELSON. Nothing of the kind that you have referred to in your statement just made?

Admiral BOWLES. No.

Senator NELSON. This was all established, these branches of work, and this distribution of work, after you came in?

Admiral BOWLES. Well, I will not say that there was nothing of it; there was some techincal department, for instance, there was something there. There was a technical department consisting of engine draftsmen, and the naval architect had his office in New York. Now, that was the only portion existing of what I have told you about.

Senator NELSON. Of this system you spoke about?

Admiral BOWLES. Yes.

The CHAIRMAN. Is it necessary to have all those departments, bureaus?

Admiral BOWLES. Absolutely essential.

Senator NELSON. Please repeat them again, briefly.

Admiral BOWLES. The technical department, the department of inspection and production, the commandeering department, the industrial service department. I would like to explain the industrial service department.

Senator NELSON. That relates to labor, does it not?

Admiral BOWLES. Yes; but I did not call it that. I think I ought to explain that I had no authority except what was lent to me by the general manager. I followed what policy was laid down by him, and

in most of the important parts of my work, where I bound the Government in money or obligation, it was my duty to prepare matters for the action of the general manager.

Now, I want to lay stress upon the fact that when the contracts came to me for administration they had been executed and made, and I have never been called upon for my advice with regard to the making of contracts until quite recently.

Senator NELSON. So that until quite recently you had nothing to do with the question as to whether it was a proper contract to make or not?

Admiral BOWLES. No.

Senator NELSON. You are not consulted about that?

Admiral BOWLES. The only part I took in the making of contracts was to prepare a program of what ships should be built. I did on the 6th of October give the general manager what seemed to me a complete program of the vessels that we ought to build.

Senator NELSON. But you were not consulted as to the scope or terms of the contract?

Admiral BOWLES. I was not.

Senator NELSON. Until after they were made?

Admiral BOWLES. I was not.

Senator NELSON. Who controlled that matter?

Admiral BOWLES. That was in the entire control of the general manager.

Senator HARDING. Is the committee to understand that there was no program adopted until the 6th of October?

Admiral BOWLES. It never has been adopted.

The CHAIRMAN. Since the 6th of October you have gone on making contracts, have you not?

Admiral BOWLES. Yes.

The CHAIRMAN. And closed contracts that were proposed after that date, or have you closed any that were proposed before that date?

Admiral BOWLES. The awarding of contracts has been a continuous performance since the Fleet Corporation was organized.

The CHAIRMAN. Have you applications for contracts that have been made since October 6?

Admiral BOWLES. Oh, yes; a great many.

The CHAIRMAN. Those contracts that were closed about December 23—how long had those applications been in, Admiral?

Admiral BOWLES. I could not say, Senator; I have no knowledge of that. But I would like to file with you some additional contracts made since my testimony began.

I stopped at No. 146 and now I am at 147, which is a contract for the construction of a concrete vessel, made with the Liberty Shipbuilding Co., of Boston, Mass., on the date of December 17.

Senator HARDING. That contract was for how many?

The CHAIRMAN. For how many and what tonnage?

Admiral BOWLES. That is 1 experimental vessel with 49 others obligated for under certain conditions, provided this vessel is satisfactory. That has not yet been settled.

Senator JONES. Is not the size of this experimental vessel settled?

Admiral BOWLES. No; it has yet to be agreed upon.

The next contract is No. 148, between the Grays Harbor Motor Ship Corporation, under date of the 28th of November——

The CHAIRMAN. Where are they located?

Admiral BOWLES. In the State of Washington. Am I correct, Senator?

Senator JONES. Grays Harbor is in Washington; yes.

Admiral BOWLES. This is for four wooden hulls. The next contract is No. 149.

Senator JONES. That means 3,500 tons?

Admiral BOWLES. Yes.

The next is with the Merrill-Stevens Co. and is for the construction of six fabricated steam vessels of 9,000 tons dead-weight.

Senator NELSON. Where are they located?

Admiral BOWLES. At Jacksonville, Fla.

Senator NELSON. Is there a shipyard there?

Admiral BOWLES. Yes, sir.

The CHAIRMAN. Have they not another place in Alabama or Louisiana?

Admiral BOWLES. At Slidell, La. The next contract is No. 150, made the 19th day of December, with the American Shipbuilding Co.

Senator NELSON. That is this Hog Island company?

Admiral BOWLES. No.

Senator HARDING. It is located on the Great Lakes, is it not?

Admiral BOWLES. This is a company organized in the State of Georgia.

The CHAIRMAN. That is Brunswick, Ga., I think.

Admiral BOWLES. It is for the construction of four wooden cargo vessels and the installation of the machinery. This next one without number should be No. 151. This is a contract with the New York Shipbuilding Co. and it provides for the construction of three troop ships. Two are in the place of two requisitioned vessels which we did not wish to complete and one is in the place of two stock ships which they had begun but which we did not wish to complete.

Senator NELSON. Now, when are those ships to be completed?

Admiral BOWLES. In one year.

The CHAIRMAN. The American Shipbuilding Co. is located at Savannah or New Brunswick?

Admiral BOWLES. At Brunswick, Ga.

The CHAIRMAN. The Merrill-Stevens Co., I think perhaps four of those were built at Jacksonville, and two at Slidell. Do you know how long these contracts have been pending?

Admiral BOWLES. I do not, sir. In regard to some questions, Senator, that were asked me yesterday, I want to say that the matter in regard to the Sloan contract was not quite finished. It required looking at the files, and the files will be here this afternoon.

Senator HARDING. Before we get away from it, let me ask you this: In answering Senator Johnson concerning the activities of the International, I think you stated that they only began their activities in October; is that correct?

Admiral BOWLES. Their contract was signed the 13th of September and they got very busy immediately.

Senator HARDING. What I wanted to ask you was this: Would the International have begun their activities earlier if their contract had been arranged?

Admiral BOWLES. I think so.

Senator HARDING. There was delay in inaugurating or starting that great yard by the failure to have the contract signed, was there?

Admiral BOWLES. Well, Senator, they undoubtedly could not start the actual work until their contract had been signed, but it does not seem to me that it would be right for me to answer that they were delayed because their contract had not been signed. I think it is fair to explain that this is one of the most important contracts, as far as I know, that the Government ever let, and it requires the most careful work, and it was the subject of a corps of people working actually day and night to complete it. Now, under this contract you must remember that the contractors had acquired the land prior to the signing of the contract, at least had acquired the site and were looking up all the matters relating to the title, in order that they might do their part, in order to avoid any delay in the final signing of the contract. The investment in the land now is theirs, $1,700,000.

Senator JOHNSON. When did they acquire it, Admiral?

Admiral BOWLES. They had the option prior to the signing of the contract.

Senator JOHNSON. They had the option after you began negotiating with them or before?

Admiral BOWLES. That I could not say.

Senator JOHNSON. Do you know whether or not you negotiated with them to furnish a specified piece of land or not?

Admiral BOWLES. I think not.

Senator JOHNSON. Did you negotiate with them to furnish any land prior to entering into any contract?

Admiral BOWLES. I could not say.

Senator JOHNSON. Can you state the manner in which the land was acquired?

Admiral BOWLES. No; I can not.

Senator JOHNSON. With whom did they first begin their negotiations?

Admiral BOWLES. With Gen. Goethals.

Senator JOHNSON. You can say with certainty, can you not, that until then they had not acquired the particular piece of land upon which the Government is erecting the plant?

Admiral BOWLES. I could not say anything about it; I don't know.

Senator JOHNSON. You do not know? Do you know whether they have definitely acquired the title yet?

Admiral BOWLES. I do not.

Senator JOHNSON. Do you know whether at the time you entered into contracts they had or whether they had not title to the land?

Admiral BOWLES. I simply heard Admiral Capps say one day that the final signing of the contract was to be delayed until the title was absolutely cleared up; that is all I know.

Senator JOHNSON. Are you familiar with the fact that the title was acquired for the purpose of entering into a contract?

Admiral BOWLES. No; I am not.

Senator JOHNSON. You know nothing about it at all?

Admiral BOWLES. No.

The CHAIRMAN. Are you, directly or indirectly, interested in any shipbuilding enterprise?

Admiral BOWLES. I am not.

The CHAIRMAN. You had negotiations, or the Emergency Fleet Corporation did, with the Southern Pine Association. Comment has been made here about their failure to furnish the timber that they undertook to furnish——

Senator JONES. Mr. Chairman, before you go into that will you let me ask the admiral a question that relates directly to this particular matter that we are on?

The CHAIRMAN. Yes.

Senator JONES. As I understand it, Admiral, the International will be paid about $6,000,000 for carrying out this contract.

Admiral BOWLES. If they comply with the deliveries——

Senator JONES. Oh, yes; of course.

Admiral BOWLES (continuing). And the conditions of the contract.

Senator JONES. How many men connected with that company are there who will do active work in connection with it who will not be paid a salary by the Government?

Admiral BOWLES. I do not know.

Senator JONES. Are there any?

Admiral BOWLES. I know one.

Senator JONES. Do you know of more than one?

Admiral BOWLES. I do not.

Senator JONES. Can you ascertain that?

Admiral BOWLES. Certainly.

Senator JONES. I wish you would. As I understand it, the Government is paying the officials and the labor and all that sort of thing and furnishing the material to do this work, and then we are to pay $6,000,000 to somebody, and I would like to know who they are and how many men there are who will be actively engaged in that work who are not receiving a salary, aside from the $6,000,000.

Senator NELSON. It will be paid to the spiritual head of the concern.

Senator JONES. It will be paid to the spiritual head of the pocketbook: that is what I want to find out.

Senator KIRBY. I understand you to say that certain ships are discontinued, not finished. Were those ships that we had contracted for before these others were? I understood you to say that certain ships you did not want were not finished.

Admiral BOWLES. I do not think so.

Senator JONES. I think the Senator refers to those contracts you referred to a moment ago.

Senator KIRBY. Contracts had been made for vessels you did not want?

Admiral BOWLES. The New York Shipbuilding Co. had contracts for two vessels for the Atlantic Transport Line, cargo vessels of 11,000 tons. The keels for those vessels had not been laid. There was a certain amount of material on hand for them in the yard. I was very anxious to secure the building of two troop ships, and in order to find a place for them it seemed to me that it was just to discontinue the building of these two ships for the Atlantic Transport Line and put the troop ships in their place; and in the same way with

regard to two cargo vessels which the New York Shipbuilding Co. had started on their own account; I discontinued those and put troop ships in their place.

Senator KIRBY. Necessarily, at the expense of the Government these ships were discontinued?

Admiral BOWLES. I can tell you all the details of that.

Senator KIRBY. No; I do not care about that. I just understood that you had ordered the first ones built, or they had a contract to build them, and then when you discontinue them of course it would be at the expense of the Government.

Admiral BOWLES. My feeling is that it is not going to cost us anything. We have made a very good trade.

Senator JOHNSON. Can you tell who constitutes the International Co.?

Admiral BOWLES. I can certainly find out.

Senator JOHNSON. I mean without difficulty.

Admiral BOWLES. Oh, yes.

Senator JOHNSON. If it is any trouble, I will not ask it.

Admiral BOWLES. It is in all the books.

Senator JOHNSON. I do not wish you to inconvenience yourself at all.

Admiral BOWLES. Certainly, I will find out.

Senator JOHNSON. Thank you, sir.

Senator BANKHEAD. Admiral, I understood you to say a few minutes ago that you had requisitioned several ships and you had not finished them?

Admiral BOWLES. Yes, Senator.

Senator BANKHEAD. What became of them?

Admiral BOWLES. Well, the keels of these vessels had not been laid. They existed in a small amount of material on hand; for two of the ships a portion of the materials had been fabricated, but in neither of them had the keel been laid.

Senator BANKHEAD. When you requisitioned those ships, you took them over, whatever there was?

Admiral BOWLES. We took all of the materials belonging to any vessel.

Senator BANKHEAD. You paid for that material, of course?

Admiral BOWLES. We had not paid.

Senator BANKHEAD. You are going to pay it?

Admiral BOWLES. We have paid now; we had not paid up to the time we made this contract with the New York Shipbuilding Co.; the original contractors had paid, but we had not paid anything.

Senator BANKHEAD. Let me see if I clearly understand the proposition. You requisitioned the ships in private yards, being built by private parties?

Admiral BOWLES. Yes.

Senator BANKHEAD. You requisitioned the ships and took them over, whatever there was?

Admiral BOWLES. Yes.

Senator BANKHEAD. What disposition has been made of those ships? Have you used that material for something else?

Admiral BOWLES. In every case that I can remember except these vessels. [After a pause.] There are two other cases. There were

three ships under contract at the New York Shipbuilding Co. that we did not proceed with. There was one vessel building at Samuel L. Moore & Sons, Elizabeth, N. J., that we did not proceed with in the way that it was provided in the contract, because it seemed to be not a useful type. So we changed that vessel to a tanker, and my recollection is we settled with the original owner.

The Newport News Co. had a contract for a coastwise passenger vessel, which we suspended the contract for, because it would have occupied a slip that could be occupied by something more useful. We are in process of settlement in that case.

Harlan & Hollingsworth Co. had a contract to build two steel passenger coastwise vessels. We have stopped the progress on those ships and applied the material to the construction of tankers. That process is going through now; it is not entirely settled.

But with these exceptions, Senator, we have proceeded with every vessel under construction in the private shipyards which were requisitioned on August 3.

Senator BANKHEAD. Could you give the committee any idea about what the total cost of these requisitioned ships is going to be to the Government?

Admiral BOWLES. The estimates that I prepared immediately after the requisitioning was begun was $515,000,000.

Senator JONES. You mean thousand?

Admiral BOWLES. I said $515,000,000.

Senator JONES. That is all?

Admiral BOWLES. Yes, sir.

Senator NELSON. That included the cost of building and also what you had to pay to the original owners?

Admiral BOWLES. To the original owners.

Senator BANKHEAD. That is what I was trying to get at.

Admiral BOWLES. I think I stated yesterday that we hoped to get out of that for very much less money, but I am not prepared to officially admit that to Congerss yet, because there were 401 ships altogether. Up to date we have settled with the owners, or we have a settlement which is binding for about 70 per cent of those ships, in which the cost to us has been very materially less than we expected.

Senator NELSON. Has it been on the basis of the contract price or has it been more?

Admiral BOWLES. If you will permit me to tell you in executive session, I will answer.

Senator NELSON. Very well.

Senator BANKHEAD. Admiral, before you get away from this other proposition, I am curious to know what the total cost has been to the Government of these requisitioned ships for which the Government gets no value.

Admiral BOWLES. I have not made myself clear, Senator?

Senator BANKHEAD. Perhaps not.

Admiral BOWLES. The requisitioning on August 3 was taking title to these ships for the United States. In every case——

Senator BANKHEAD. You simply requisitioned the title before any construction had taken place?

Admiral BOWLES. We took actual possession and thereby acquired title to whatever there was in the way of a ship regardless of contract.

Senator BANKHEAD. I understand that.

Admiral BOWLES. Regardless of stipulations—took possession of the actual thing. Now then, we had two things to do: One was to complete the ship for which we paid the money out of the Treasury.

The CHAIRMAN. There were some already completed?

Admiral BOWLES. There were some in all stages.

Senator BANKHEAD. I did not call for those that were completed.

Admiral BOWLES. We paid for the completion out of the money in the Treasury, and then the ship was ours. We had, in addition, then to pay the original owner this compensation for the taking of his vessel in whatever state we found it.

Senator NELSON. May I ask one question along with yours, Senator?

Senator BANKHEAD. Yes.

Senator NELSON. After you requisitioned these vessels, did you proceed expeditiously with the construction of all of them, or did you suspend work on some of them?

Admiral BOWLES. The notice by which the requisition was made said, "You will proceed expeditiously with the completion of these ships."

Senator NELSON. That is your notice, but has that been done?

Admiral BOWLES. Yes; that has been done.

Senator NELSON. So that after requisitioning you proceeded with the construction of these ships—all of them?

Admiral BOWLES. All of them.

Senator NELSON. According to the terms of the contracts, or did you attempt to expedite it?

Admiral BOWLES. We attempted in every case to expedite them. We made some changes in the ships for the purposes I described to you.

Senator NELSON. What proportion of these requisitioned ships were steel and what proportion were wooden ships?

Admiral BOWLES. They were all steel ships.

Senator BANKHEAD. I understand the admiral now to say all these requisitioned ships have been completed, either by the Government or by the original owners.

Senator NELSON. Only 45 have been completed.

Admiral BOWLES. Only 49.

Senator NELSON. I am not talking about uncompleted ships.

Admiral BOWLES. They are all proceeding, with the exception of the ones I have told you we wanted to put something else in their places.

Senator BANKHEAD. Admiral, I want to ask you one more question, in reference to the statement you made a while ago. You said you made up a complete program and submitted it to somebody—to the president of the board or somebody else.

Admiral BOWLES. I did.

Senator BANKHEAD. I understood you later to say that the program had never been adopted.

Admiral BOWLES. That is true.

Senator BANKHEAD. Will you tell us why it has not been adopted?

Admiral BOWLES. I think I ought to explain that in executive session; I would not like to show you that program in open session.

Senator BANKHEAD. That is all right, Admiral.

The CHAIRMAN. Admiral, coming back to the lumber situation: The statement has been made that the Southern Pine Association failed to comply with its agreement for its timber.

Admiral BOWLES. I did not make the statement, did I, Senator?

The CHAIRMAN. I did not say you did. I think it was made by a number of gentlemen who testified—that they promised to do certain things, make certain deliveries, and were not able to do it. Do you know whether or not any effort was made to deal with individual manufacturers of lumber, to give the "independents," as they call themselves, an opportunity to bid on this timber and furnish it? For instance, my understanding is that the Southern Pine Association, made up of a membership which altogether would probably amount to 25 per cent, maybe 35 per cent, of the manufacturers engaged in sawing lumber, and the question is: Have you limited your dealings entirely with the ones concerned with reference to the furnishing of timber for these ships, or have you given the independents—those outside, that 65 per cent outside of the Southern Pine Association—an opportunity to bid on this timber and furnish it?

Admiral BOWLES. I happen to know something about it; but, of course, the best witness to this is our general purchasing agent, Mr. Brown, who actually did the business himself. The only thing I know about it is this, that the assistant purchasing officer told me that he had placed a great many orders with the independents. In addition to that, I know that a delegation of independents called on me, to get me to use my influence to get some orders for them. When they came to me the going price for which the Southern Pine Emergency Bureau had undertaken to supply this lumber from the South was, as nearly as I can remember, $35 a thousand, and these independents said they could supply a very considerable quantity, but their price was $50, and they would not look at an order at any less; and so I bid them "good day."

The CHAIRMAN. That was the only instance you know of?

Admiral BOWLES. That is the only thing I know.

Senator JONES. Did they give any reasons why they would not consider a contract for less than $50 a thousand?

Admiral BOWLES. I think they said they could sell all their product at that price, and I imagine it was true.

Senator JONES. They did not point out the increased cost of labor and all that sort of thing?

Admiral BOWLES. No; they did not do that; they said the building of the cantonments and other similar things had produced such enormous demands that they could get orders at that time at much higher prices than we were paying, for bills that were very much easier to fill, and I believe it was true.

Senator JONES. In other words, they wanted to get all the profit they could?

Senator BANKHEAD. Of course they did.

Admiral BOWLES. I did not blame them; but there is no use of their complaining that they could not get orders, because they could have got plenty at the price that the other people had offered to supply it.

Senator BANKHEAD. Admiral, the subject was introduced by Mr. Stevens or some other gentleman about the construction of wooden

ships, that they had made their plans and specifications for a number of ships, and that they had made contracts under those specifications and that later the specifications were changed, the size of the timbers were increased, and these parties could not fill their contracts. Do you know anything about that?

Admiral BOWLES. Senator, I explained that fully in my testimony yesterday.

Senator BANKHEAD. I was not here. Then, it is in the record?

Admiral BOWLES. It is in the record, but I will be happy to give it again if you would like to have me.

Senator BANKHEAD. No.

Admiral BOWLES. Here is a copy of the amended schedule for the southern yellow pine in the Ferris standard vessels, and it involves about 1,700,000 feet b. m. for each vessel, and the changes that were made in the framing plans of the wooden vessels involves an increase in this schedule of about 100,000 feet.

Senator NELSON. For each ship?

Admiral BOWLES. For each ship; and the sizes were not of the maximum size already in the schedule. Would you like to look at that, Senator [indicating pamphlet]?

Senator BANKHEAD. No.

The CHAIRMAN. That was revised November 1?

Admiral BOWLES. That is the revised schedule made after the changes were made.

Senator BANKHEAD. The inquiry I had in my mind is this: Had these contractors obligated themselves to build these ships at a stipulated price under stipulated specifications, and they had constructed some shipyards and all that sort of thing at considerable cost, and that you changed these specifications so they could not build the ships. I wanted to know what had become of their investment.

Admiral BOWLES. Every contract has a provision in it that the owner has a right to make changes and prescribes the methods by which contractor shall be paid. There was no change made that would have affected the contractor's plant or his investment, and that, in my judgment, would not yield him an additional profit if he handled it right.

Senator BANKHEAD. That is just a difference of opinion between you and the contractor.

Admiral BOWLES. I have had no difference of opinion with them up to date.

Senator BANKHEAD. A good many of them said, "We can not build; we can not furnish these specifications."

Admiral BOWLES. You are not thinking of ship contractors; you are thinking of the people who took orders to supply the schedules of lumber.

Senator BANKHEAD. Well, whoever it was; I thought it was the ship contractors who made a bid on the specifications.

Admiral BOWLES. No; the ship contractors undertook to build the ship. The Fleet Corporation in a number of cases undertook to supply them with the lumber and placed the orders for them. It is true that some mills undertook to supply those schedules and had great difficulty with them. They proceeded to go through the schedule and pick out the things that they could supply, and you would find that

up and down the coast the shipyards were supplied with decking and planking and joiner-work lumber that they would not use until the very last thing. Any extra cost that was involved in these changes was paid by the Fleet Corporation.

Senator BANKHEAD. That is just exactly what I was trying to get at.

The CHAIRMAN. The contractor would suffer in case he could not get his material promptly or as he desired?

Admiral BOWLES. Yes; but if that occurred he had a good claim against us.

The CHAIRMAN. He might have his force of men idle.

Senator BANKHEAD. You just paid the difference?

Admiral BOWLES. Yes, sir; we have got it to pay.

Senator BANKHEAD. And you met that difference because the plans and specifications were changed?

Admiral BOWLES. The trouble with those wooden contracts was many of them were undertaken by people who had never built a ship before and never entered into a contract of the formality and complication of the ship contract, and in the course of my duties I have never thought it was good taste to invite a contractor to put in a claim, but the most of these contractors have been so ignorant that I have had to explain to them that they had a good claim and to tell them actually how to figure it up.

The CHAIRMAN. Admiral, have you finished with the outline of those duties? I do not know whether you were interrupted before you concluded that or not; you were interrupted, I know.

Admiral BOWLES. I had finished the outline of those duties, and I had indicated that I would like to explain something with regard to the industrial service department. In addition to that, I would like to take up the matter of housing and some things in which I think that you could be of help to us; and then the matter of executive session.

The CHAIRMAN. Gentlemen, with regard to this report of Mr. Inglis, it seems to me if there is anything confidential in this whole matter it would be this, because it is a report from an investigator to his principal, in the first place, and then it shows the various stages of work on various ships in the various yards which he examined, and I do not see that it gives us any new light. The committee has the data, perhaps, and all that they want on this subject, and so far as I can observe it is a matter that need not go into the record.

Senator HARDING. I do not think there is any advantage in having that in the record.

Senator JOHNSON. Senator McNary wishes me to ask you a question concerning the price paid for pine. Has the price been raised by the board to $40 a thousand?

Admiral BOWLES. It has been twice raised and is now something over $40.

Senator JOHNSON. What price is it now, if you please?

Admiral BOWLES. I can not say the exact price. That is the average price. That is the average price in this schedule which I handed in a moment ago, and you will see that the price was specified for every item, and I think the average is something over $40.

Senator JOHNSON. The Senator asked whether or not $35 per thousand was not the price paid on the Pacific coast?

Admiral BOWLES. That I do not know.

Senator NELSON. Admiral, did you state the price of Douglas fir?

Admiral BOWLES. I did not; and I do not remember, Senator, what it was. I have never had anything to do with the placing of those orders, but I can easily find out.

Senator NELSON. I wanted to ask you one or two questions. I have here a galley proof print of the first part of the list of the ships you gave us yesterday, and I find from this list that from the first of April—April 20 appears to be the first date the contract was made—up to July 3, 28 contracts were let, and out of those contracts 10 appear to be in existing shipyards and 18 were contracts with yards that did not exist. And then I find that out of the whole number of 28 there were 18 contracts for wooden ships. Did that look like an expeditious method of pursuing business to let so many contracts where there were no yards at all? I will show you the list.

Admiral BOWLES. I have the list before me, Senator.

Senator NELSON. These were marked with asterisks.

Admiral BOWLES. Yes.

Senator NELSON. They are marked there down to the 3d of July. I think.

Admiral BOWLES. In answer to that, Senator, I am trying to remember the shipyards in existence that built wooden vessels. My impression is that they were very, very few.

Senator NELSON. Evidently those stars indicate it in your list there.

Admiral BOWLES. Yes; but of those that were starred, the Merrill-Stevens Co., a yard in existence, got one of the earliest contracts for wooden vessels; the Peninsula Shipbuilding Co. was the next yard that was in existence. Now, they got a contract for wooden vessels. Just preceding them, on the 13th of May, was the Los Angeles Shipbuilding & Dry Dock Co., which got a contract for steel vessels. That yard launched the second steel vessel for the Emergency Fleet Corporation, and they started from an open field. That vessel was launched——

Senator JOHNSON. They started last June?

Admiral BOWLES. Yes; they started last June, and they launched the first ship about two weeks ago.

Senator NELSON. How many wooden vessels on these contracts have been completed and are afloat?

Admiral BOWLES. There are two vessels afloat, none completed. I think, although I have not counted it up exactly, in the period to which you refer, from April 29 to July 3, there were considerably more wooden vessels awarded than the existing shipyards were capable of turning out.

Senator NELSON. That list indicates it. It would indicate that most of the contracts, if you take this list here for wooden ships—I do not know about the tonnage—but the greatest in numbers on these contracts were where there were no yards in existence at all?

Admiral BOWLES. Yes.

The CHAIRMAN. Then, if that is all, I think we had better proceed with executive session, as we want to hear what Admiral Bowles has to say in confidence.

Admiral BOWLES. I have a number of other things, Senator, that I would like to finish first, if it would be agreeable to you.

The CHAIRMAN. I thought you had finished.

Admiral BOWLES. No, sir.

The CHAIRMAN. All right, proceed.

Admiral BOWLES. I wanted to explain to you the organization of the industrial-service department.

Senator NELSON. That is, the labor department—it relates to labor?

Admiral BOWLES. It relates to labor. The shipyards of the United States, not having conducted a profitable industry for many years, had not been able to adopt the best and the most modern methods with regard to the employment of men nor the conditions under which they worked. Therefore, it seemed to me that as the shipbuilding program depended upon the recruiting of the shipyard forces in man power that one of the most important things that the Fleet Corporation could do was to attempt to instruct the shipbuilders how to organize for getting men and how to keep men when they got them. For that purpose we organized this industrial-service department, and one of the first things was to try and obtain from the shipbuilders——

Senator NELSON. Who is at the head of this?

Admiral BOWLES. Mr. Meyer Bloomfield, whom I am going to ask you to hear and tell his own story. I am only trying to give you an idea of what we have attempted to do. We started in to try to get from the shipbuilders the facts in regard to employment, and that has been exceedingly difficult and has not yet been entirely accomplished, although we started in September. Our last returns show that from 109 shipyards there are 149,270 employees; and that shows an increase of 45.2 per cent in nine weeks. But we find from the shipyards that there is an enormous turnover of men, and that the average turnover of all the shipyards is over 300 per cent; that is, they have to employ three times their actual force during the year in order to maintain it at all, and in many of the largest shipyards the turnover is 600 per cent. Our attempt has been, by getting the various people together, to disseminate the knowledge of those who are most skillful in this to those who are inexperienced.

Senator HARDING. Admiral, you mean by the "turnover" that there must be an excess of employment in order to have a full roll of operators?

Admiral BOWLES. I mean to say that if a man is employing 10,000 men as a regular force, that during the year he will employ 60,000 men to maintain it.

Senator HARDING. Has not the industrial service department ascertained the cause of that?

Admiral BOWLES. I think so, in a measure.

Senator HARDING. What is that cause?

Admiral BOWLES. It is a great variety of causes. For instance, out of the 109 shipyards only 20 reported that they had a central employment agency; that is, that their men were employed by discriminating persons, who took care to locate the men in the jobs that they were capable of filling. In the other shipyards, the 90 others, the men are employed by the foremen, men who are harassed every moment the livelong day with regard to the actual conduct of the work, and if a man shows the slightest fault on what he is first put at, or even before he gets to his job, the foreman says "You are no

good," and out he goes. That is one of the greatest elements in the turnover, the unintelligent application of the man power that offers itself.

There are a number of other causes relating to sanitary conditions, safety conditions, the transportation conditions for getting men to and from their work—all those things affect this turnover in the shipyards.

Senator BANKHEAD. Admiral, do you not think that the higher rate of wages that is being paid has a good deal to do with it?

Admiral BOWLES. Now, Senator, I did hope that I was going to escape that phase of the subject.

Senator BANKHEAD. I withdraw the question.

Admiral BOWLES. I have tried to deal with what I call the constructive side of the labor question and stay entirely aloof from the matter of disputes in wages.

The other important feature of the industrial-service department was an attempt to recruit skilled labor by vocational training. We have secured the services of the best vocational-training experts of the country and we have started what we call "an industrial Plattsburg." We have offered any shipbuilder who will send skilled men to our training school $5 a day for each man that he sends for the six weeks' course as a contribution toward the expense, and then if he establishes a training center in his own shipyard when these men come back we will pay each shipbuilder a dollar a day for each man who goes into training at his shipyard for 78 consecutive days, 50 cents of this going to the shipbuilder as a contribution for loss of efficiency and 50 cents to the man as a bonus for undertaking the training. The purpose of it is to teach intelligent mechanics who have the capacity of leadership to teach others, and I believe that if this system is followed up that it will lead to the production of at least 50,000 skilled workmen in the course of a year and at a minimum expense. I wanted to ask you to hear, if you will, from the people who are carrying this work on.

Mr. Chairman, I would like to say a word in regard to the housing problem. That is a matter which it is not for me to deal with finally, but I have become involved in it because the housing is an essential part of the production of tonnage. Up to date the Fleet Corporation has done this: We found that for the American International Corporation they would require to employ about 25,000 men, and that with the limited facilities for transportation from the city of Philadelphia we could not expect to get there every day more than 15,000 men and it would be necessary to provide housing for 10,000 men.

Senator NELSON. Ought not the International company to house its own men, with a big, fat contract like they have? Why should they not house their own men instead of the Government's doing so?

Admiral BOWLES. The maximum possibilities, Senator, that they can get out of the contract is about $6,000,000, and the cost of the housing that we find they must provide for amounts to $10,000,000.

Senator NELSON. You know they own the ground and the houses would be theirs.

Admiral BOWLES. No, sir.

Senator NELSON. And they would have a big shipyard ready there.

Admiral BOWLES. If you will do what we ask you to do, we will own the whole business.

One of the difficulties that we have at the present time with the housing problem, Senator, is that we have no authority to commandeer houses nor to take land. You know that the laws of the United States with regard to the purchase of land are exceedingly rigid and we can not buy a piece of land without an appropriation from Congress.

Senator BANKHEAD. Admiral, excuse me. Have we not got statutes authorizing the President to take possession of that land and fix the price?

Admiral BOWLES. We have only one, and that relates to the Navy, for the construction of destroyers, and my feeling is that the authority there given will not be sufficient for us; that is, in the form in which it is given there.

Senator BANKHEAD. Do you not think it would be better to extend that authority?

Admiral BOWLES. I do. I am asking that you will give us authority in the Fleet Corporation to requisition houses for men. I want authority to take houses. I know of a shipyard which is in the vicinity of a summer colony which is capable of housing 6,000 men. Men could be put into that place at once and relieve a situation of the greatest importance to us. I know many other similar cases where this housing expense can be avoided if we had the authority to take houses.

Senator JONES. The houses in this place you refer to are used in the summer now and are closed up in the winter?

Admiral BOWLES. Yes.

Senator BANKHEAD. If you were to take those houses, you would have to pay for them, would you not?

Admiral BOWLES. Certainly.

Senator BANKHEAD. Who would fix the price?

Admiral BOWLES. We would—the President of the United States.

Senator NELSON. If they could not agree, it would be subject to arbitration.

Senator HARDING. The courts would fix it.

Admiral BOWLES. If we had to go to the courts, we would do so.

Senator NELSON. These are summer tourists, Senator, and I do not know why we would be so sensitive about that.

Senator BANKHEAD. I am not making a special plea for the tourists, but I am suggesting that if you go into court the local jury would not fix a low price.

Admiral BOWLES. We do not want to do that. We want to be free from the courts. We want to go out and say, "We want this land and we are willing to pay you so much for it. If you won't agree to that, we will pay you 75 per cent and you have got your recourse in the courts, but we must have it, and that is the end of it."

Senator NELSON. One great thing we have accomplished by this war has been stopping this great flow of tourists to Europe, where they have been spending millions of money. Now, if we can keep these people away from their summer cottages and utilize those cottages for laborers, we will supplement the other good work, and these rich men will have capital to buy Government bonds with. [Laughter.] So, I am decidedly in favor of that idea, Admiral.

Admiral BOWLES. I think it will save millions of dollars.

The CHAIRMAN. Why not locate these plants where you would not have that housing problem to deal with—localities where you do not need to spend so much money?

Admiral BOWLES. How can we help it when we have to have an enormous area of land for a shipyard capable of having 50 shipways for ships? We must have vacant land. For the American International Co. we were obliged to build a town entirely apart from Philadelphia for this purpose.

The other project of housing that we have under consideration is at another shipyard which is a considerable distance from the center; that is at Sparrows Point, Md., about 9 miles from Baltimore, where they have been able to get only half the number of men that their shipyards are capable of employing, and there if we could build 1,500 houses we could increase that force and increase the production of that shipyard by 10 large boats annually.

Senator NELSON. Do you propose to build houses of what I would call a temporary character, or would you build expensive and permanent houses?

Admiral BOWLES. My idea was to build permanent houses, and we have progressed this far with the Sparrows Point project: The owners of the shipyard are willing to put in the land; they are willing to give us a first mortgage on the land and houses built and let us regulate the rents and the prices at which they would be sold; that all rented houses would be exclusively occupied by shipyard workers. We asked them to guarantee the return to us within from five to ten years of at least three-fourths of the money. We were willing to take our chances on the other quarter in the land and the houses themselves.

Senator NELSON. Who would finally own the land and the houses?

Admiral BOWLES. They would own them after they had paid us, but our mortgage on the whole would hold until we got the last cent. For that purpose it is necessary to build a permanent type of a house.

Senator BANKHEAD. Admiral, you would expect to charge a reasonable rent?

Admiral BOWLES. We would expect to control the rent and see that the rent was reasonable in proportion to the accommodations, and we would exercise entire control over the expenditure of the money, to see as far as possible that nobody made any profit except the people that actually did the work.

Senator NELSON. Your idea, then, if I gather it correctly, Admiral, is you want help in two directions: One is, you want authority to use money to build such houses?

Admiral BOWLES. Yes.

Senator NELSON. And then you want authority, also, to commandeer houses?

Admiral BOWLES. I do.

Senator NELSON. Such as in the case you refer to—both?

Admiral BOWLES. Yes. We would not take title to the houses that we commandeered; we would only requisition the use for a limited time, so that really is an enforced lease.

Senator NELSON. You would commandeer the use of the houses and nothing more?

Admiral BOWLES. Yes; but in places where we have to build these towns of permanent construction we ought to have authority to take the land by commandeering methods.

Senator JONES. If there was an extension of the provision in the naval bill, would that meet your situation?

Admiral BOWLES. Yes. I have taken the liberty of trying to throw together the ideas I have explained to you in the form of a draft of a bill. I know it is not in the form that it ought to be, but it is merely a suggestion of the powers that I think we ought to have.

Senator NELSON. Have you any objection to having it go in the record?

Admiral BOWLES. I have none whatever.

Senator JONES. I think that ought to go into the record.

(The draft of the bill submitted by Admiral Bowles is here printed in full, as follows:)

HOUSING BILL.

AN ACT Making appropriations to supply urgent deficiencies in appropriations for the fiscal year ending June thirtieth, nineteen hundred and eighteen, and prior fiscal years on account of war expenses, to provide for proper housing of employees of shipyards, and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America, in Congress assembled, That the United States Shipping Board Emergency Fleet Corporation is hereby authorized and empowered within the limits of the amounts herein authorized—

(a) To purchase, lease, requisition, or otherwise acquire any improved or unimproved land suitable for the construction thereon of houses for the use of employees of shipyards in which there are now being constructed ships for the United States.

(b) To construct on such land houses and all other necessary or convenient facilities, upon such conditions and at such price as may be determined, and to sell, lease, or otherwise dispose of such houses, land, and facilities upon such terms and conditions as it may determine.

(c) To purchase, lease, requisition, or otherwise acquire any houses or other buildings, together with the land on which the same are erected, and all necessary and proper furnishings therefor; to manage, repair, sell, lease, or otherwise dispose of such houses and buildings upon such terms and conditions as it may determine.

(d) To cancel, modify, suspend, or requisition any existing or future contract relating to the purchase, lease, or mortgage of any such land or building. All houses, land, facilities, and furnishings acquired as herein provided shall be leased, sold, or otherwise disposed of only to persons now or hereafter employed in the shipyards constructing ships for the United States.

Whenever said United States Shipping Board Emergency Fleet Corporation shall purchase, lease, requisition, or otherwise acquire such land or such houses, or shall cancel, modify, suspend, or requisition any such contract it shall make just compensation therefor to be determined by it, and if the amount thereof so determined by it is unsatisfactory to the person entitled to receive the same, such person shall be paid seventy-five per centum of the amount so determined by it, and shall be entitled to sue the United States to recover such further sum as added to such seventy-five per centum of the amount so determined by it, and shall be entitled to sue the United States to recover such further sum as added to such seventy-five per centum of the amount so determined by it, and shall be entitled to sue the United States to recover such further sum as added to such seventy-five per centum will make up such amount as will be just compensation therefor in the manner provided for by section twenty-four, paragraph twenty, and section one hundred and forty-five of the Judicial Code.

The power of purchasing, leasing, requisitioning, or otherwise acquiring such land and houses herein granted shall cease six months after the termination of the present war with Germany.

The word "person" used herein shall include any person, trustee, firm, or contractor. The word "shipyard" shall include any factory, workshop, ware-

house, engine works, buildings used for manufacturing, assembling, construction, or other process in shipyard and dock yard and discharging terminal, and other facilities connected therewith, now or hereafter used in connection with shipbuilding.

The cost of purchasing, leasing, requisitioning, or otherwse acquirng houses, lands, facilities, or furnishings shall not exceed the sum of $50,000,000, the expenditure of which is hereby authorized, and in executing the authority granted by this act for such purpose the said United States Shipping Board Emergency Fleet Corporation shall not expend or obligate the United States to expend more than the said sum, and there is hereby appropriated for such purpose $25,000,000.

All acts inconsistent with the exercise of the powers herein granted to the extent that said acts are inconsistent are hereby repealed.

Admiral BOWLES. At this point I would like to tell you of a program——

Senator NELSON. You mean labor difficulties?

Admiral BOWLES. Yes; difficulties in getting labor to the point where we want it. We will have a great deal of difficulty with local transportation, and I would like to have lawful authority to compel the trolley lines and ferryboats to provide special transportation for shipyard workers in accordance with the methods of transportation, because if we can do that we can enlarge the circle in which men can live, and thereby decrease the expense that we have to go to for housing, and we can decrease this turnover of men who will become dissatisfied with having to spend an hour standing up in a street car in order to get home.

Senator NELSON. In other words, you want authority to requisition street car service necessary for the men?

Admiral BOWLES. Yes, sir.

In addition to that, I would like to have lawful authority for the Fleet Corporation to declare a war zone around a shipyard.

Senator NELSON. That is certainly necessary.

Admiral BOWLES. It is necessary for protection, and it is necessary also for reasons that contribute to this turnover. If we could exclude unsuitable conditions for a reasonable area around a shipyard it would materially help us.

The CHAIRMAN. I think the present law gives the President that power.

Admiral BOWLES. I am advised that we would require legislation to effect it.

Senator NELSON. Oh, I think you would; I do not think the espionage law quite covers it.

Admiral BOWLES. I do not want to have you think I am full of trouble, but all these things would be an important help to us in getting men who are necessary to carry out this program.

In one other thing we have been having serious trouble within the last three weeks, and that is in placing contracts for new vessels at any sort of a reasonable price, owing to the fear that has entered the heart of every shipbuilder in regard to the taxation laws. The shipbuilders at one time hungered and thirsted for contracts at cost and 10 per cent but now do not want one. They say that they would have nothing left after two-thirds of it has been taken. My own experience teaches me that a shipbuilder, in order to have a profitable contract, should have 10 per cent of the value of the work that he does in real money, otherwise he will actually go behind from the things

that are invisible. Many contractors are coming to us to-day and asking us to protect them against the taxation laws.

Senator JOHNSON. What taxation laws do you refer to?

Admiral BOWLES. The excess-profits tax.

Senator JOHNSON. The one that has been passed by Congress?

Admiral BOWLES. Yes.

Senator JOHNSON. Well, I think they need it.

Admiral BOWLES. You think they need the protection?

Senator JOHNSON. Oh, yes; from that particular law.

Admiral BOWLES. It would be very helpful to us if you could give us the necessary authority. Of course, so far as I have been consulted I have advised that it is not suitable for us to attempt to legislate, and then we can not protect anybody against the operation of the taxation laws.

Senator JONES. Admiral, I want to ask you about this last suggestion. I don't know whether I caught it or not. You want authority under which you can exempt shipping men or shipping contractors from the operation of our tax laws?

Admiral BOWLES. I think it would be very helpful to us in getting the results, for two reasons.

Senator JONES. Does that mean that you want authority to exempt one contractor and let the law apply to another?

Admiral BOWLES. Oh, no.

Senator JONES. And make an exemption of a certain amount for one and a certain amount for another?

Admiral BOWLES. I can not say, Senator, how to do it, but I only tell you we are in deep trouble now in making contracts owing to the uncertainties of the operation of this law.

Senator JONES. Instead of giving you authority for doing anything along that line, would it not be better for us to exempt them from the operation of the law?

Admiral BOWLES. Certainly.

Senator JONES. Instead of giving you the authority to do it?

Admiral BOWLES. Certainly; we de not want the authority to do it.

Senator NELSON. Have you not enough contracts outstanding now if you could build but the ships you have contracted for; will not that pretty nearly fill the bill?

Admiral BOWLES. They will complete these ships, Senator, and we must keep them going at full tilt.

Senator NELSON. This involves between 8,000,000 and 9,000,000 tons, does it not?

Admiral BOWLES. Yes.

Senator NELSON. If you got those contracts completed which are outstanding, what more do you need than to rush those?

The CHAIRMAN. We have got to consider submarines.

Senator NELSON. That is in the Navy Department.

The CHAIRMAN. No; these vessels will not live forever, you know.

Senator JONES. Where are the contractors located who are protesting against being subjected to these taxes?

Admiral BOWLES. Everywhere.

Senator JONES. I have seen several telegrams from the Pacific coast indicating that they are willing to enter into contracts now for ships.

Admiral BOWLES. At very high prices.

Senator JONES. I do not know how the prices compare with those under existing contracts. At any rate, they seem to be very anxious to get contracts, and apparently on the terms——

Admiral BOWLES. The prices are out of sight.

Senator NELSON. Admiral, you have by your scheme practically knocked out private shipbuilding in this country, haven't you?

Admiral BOWLES. We have but one customer for the shipbuilders now.

Senator NELSON. And that is the United States or the Emergency Fleet Corporation?

Admiral BOWLES. Yes.

Senator NELSON. Now, where the shipyards have only one customer, and that is yourself, what competition have you about the matter of price?

Admiral BOWLES. We have none.

Senator NELSON. Then you have the right to say what you will give?

Admiral BOWLES. So we have, but the charge is on us to produce ships.

The CHAIRMAN. If you can not get it done at proper prices you come back to my original proposition—you have got to do it yourselves.

Admiral BOWLES. I did not finish telling you, Senator, why some action by Congress in this matter would be helpful to us. Not only would we be able by clearing this situation up to establish a reasonable price for contracts in which the contractor now takes the risk, neither of us knowing what the result is going to be to him, but if we could eliminate that unknown quantity it would be economical to the Government and, in my judgment, it would be quieting to labor.

Senator JOHNSON. In the one instance of the American International Co. the contractor takes no risk, does he?

Admiral BOWLES. Yes; he pays the taxes.

Senator JOHNSON. Oh, yes; he pays the taxes on this amount and then gets the six or eight million for the "know how."

Admiral BOWLES. And he loses a very large proportion of his fee if his cost exceeds his estimate or his deliveries are not fulfilled.

Senator JOHNSON. Yes; and receives an increased amount if his cost is less or his delivery in advance?

Admiral BOWLES. Yes.

Senator JOHNSON. So that is a mutual proposition, is it not, working both ways?

Admiral BOWLES. Yes.

Senator JOHNSON. Is that situation the same with the other two, the Submarine—and what was the other one?

Admiral BOWLES. The Merchants.

Senator JOHNSON. Yes; and the Merchants?

Admiral BOWLES. Yes.

Senator JOHNSON. Those three companies are building how many ships?

Admiral BOWLES. The Submarine is building one hundred and fifty 5,000-ton ships; the Merchants, one hundred and forty 9,000-ton ships; and the American International, fifty 7,500-ton ships and seventy 8,000-ton ships.

Senator JOHNSON. That is 310, all told. That is a pretty fair proportion of the whole number that you are contracting for?

Admiral BOWLES. We have 550-odd contracted for of steel vessels.

Senator JOHNSON. Outside of those?

Admiral BOWLES. No; including those.

Senator JOHNSON. So that there are in these three contracts 310 out of 550?

Admiral BOWLES. Yes.

Senator JOHNSON. Are all three of those corporations upon the same basis as the International?

Admiral BOWLES. The same theory; yes.

Senator JOHNSON. So that they take no chances, and receive this amount you have designated?

Admiral BOWLES. Yes.

Senator JOHNSON. Don't you rather think they ought to pay taxes?

Admiral BOWLES. Why, of course.

Senator JOHNSON. And a very large proportion of taxes as well. You would not want anything that would give you power to exempt them, would you?

Admiral BOWLES. I think they are in a different situation, although it does not look so very good when you examine these figures. The total fee is $6,000,000, the tax $3,600,000, leaving a balance of $2,400,000. The land investment amounts to $1,706,000, leaving a final balance of $694,000.

Senator JOHNSON. Oh, yes; if you deduct the land investment. There is another question in that regard that I did not intend to ask you, but do you know whether or not they are interlocking with any other corporations that furnish materials?

Admiral BOWLES. Not to my knowledge.

Senator JOHNSON. Are they not composed of individuals who are interested as well in the materials that are furnished for shipbuilding?

Admiral BOWLES. The principal materials in the ship are steel, and I have no knowledge that there is any direct interlocking relation at all.

Senator JOHNSON. Are there not individuals who are members of both corporations?

Admiral BOWLES. Individuals are probably stockholders, but whether they are corporate officers I do not know.

Senator JOHNSON. Well, the fact of the matter is that the individuals who are interested in the American International are interested as well in corporations that are furnishing materials for the building of those ships, is it not?

Admiral BOWLES. Not that I have any knowledge of.

Senator JOHNSON. You could ascertain that readily, could you not, Admiral? If not, I won't trouble you with it.

Admiral BOWLES. I should prefer not to do it.

Senator JOHNSON. Very well; I shall not ask you to do it.

Admiral BOWLES. Because, as I say, the principal materials are steel, engines, and boilers. Those are the things I have to do with, and I have no knowledge of their being interested.

Senator JOHNSON. Very well. It was suggested the other day that the financial backing of this International Co. was the National City Bank, was it not?

Admiral BOWLES. It was.

Senator JOHNSON. Do we need to go further to inquire whether those interested in the National City Bank are interested in any of the materials that are furnished for the building of the ships?

Admiral BOWLES. That is a matter that I have personally no knowledge of whatever.

The CHAIRMAN. Was that contract put in the record yesterday, Admiral?

Admiral BOWLES. The contract with the American International Corporation was.

Senator NELSON. Is that one of the sample contracts you referred to?

Admiral BOWLES. It is.

Senator NELSON. That will be printed in full, then?

Admiral BOWLES. Yes.

The CHAIRMAN. Admiral, these three plants are all on one railroad—the Pennsylvania—are they not?

Admiral BOWLES. I think there are two railroads leading to the Bristol plant, the Reading and the Pennsylvania; that is, the Hog Island plant. I do not know which railroad goes to Bristol.

The CHAIRMAN. It simply occurred to me as being possibly a pretty heavy burden to put on an already overburdened road, three tremendous plants like those.

Admiral BOWLES. I think two railroads go to the Newark plant.

Senator JONES. Admiral, with reference to these proposed contracts for the Pacific coast, can you give me some idea as to how much they have increased their demands?

Admiral BOWLES. You mean, on account of taxation?

Senator JONES. Yes.

Admiral BOWLES. Why, I should say from $15 to $20 a ton.

Senator JONES. What are you paying now per ton?

Admiral BOWLES. Where we are paying now $160 they want $180 to $185, and some as high as $200.

Senator JONES. And you can not get any proposals from responsible people at the old prices? Is that true?

Admiral BOWLES. That is true. I will not say they have all been canvassed, Senator, but all the principal ones are now negotiating with us for additional contracts, and that is the situation.

Senator JONES. For additional contracts? You mean, those that have existing contracts do not seem to be willing to take additional contracts except at an increase of $20 a ton?

Admiral BOWLES. A very much increased price.

Senator JONES. The telegrams I have seen from people out there are from people who have not been able to get contracts or have not been able to get vessels sufficient for their accommodations. Do you know whether they are asking prices that are above the regular price?

Admiral BOWLES. Every one.

Senator JONES. I do not see Senator McNary here. Senator McNary has several telegrams from builders and corporations in Oregon

that I should have liked to be able to present to you in that connection. They complain that they are not able to get the contracts; that they have ample facilities and labor and an excess of material, but they can not get contracts for any ships, some of them.

Admiral BOWLES. Were these contracts for wooden vessels?

Senator JONES. That is what I am talking about.

Admiral BOWLES. I am talking about steel ships.

Senator JONES. Oh, that is what you were referring to in the matter of taxes?

Admiral BOWLES. Yes.

Senator JONES. I am referring to wooden ships. I am glad to have that cleared up, then. It is the steel people that are objecting to this excess-profits tax?

Admiral BOWLES. Yes.

Senator NELSON. Don't you think the outstanding contracts you now have exhaust the supply of material that can be readily secured?

Admiral BOWLES. No, sir.

Senator NELSON. I mean the material that can be secured promptly and rapidly.

Admiral BOWLES. No, sir; I do not.

Senator NELSON. I thought you said our wooden ships were being delayed for lack of material?

Admiral BOWLES. But I think the situation with regard to steel ships is materially different.

Senator NELSON. You think there will be no lack of material, no embargo, in that case?

Admiral BOWLES. We may have to resort to an embargo to reserve the supply of steel plates for ships, but the capacity is here and the need is here.

Senator NELSON. Are the mills turning out such a quantity?

Admiral BOWLES. Yes; they are at present.

Senator NELSON. And filling the demand?

Admiral BOWLES. Yes.

Senator NELSON. In all yards where they are building steel ships for the Government?

Admiral BOWLES. Yes.

Senator BANKHEAD. Admiral, do you remember whether or not you have had an application from the Tennessee Coal & Iron Co. for a contract to furnish iron for these ships?

Admiral BOWLES. I think there is a corporation forming for the construction of a shipyard at Mobile.

Senator BANKHEAD. The Tennessee Coal & Iron Co. is an old corporation.

Admiral BOWLES. I mean a subsidiary corporation for shipbuilding, which was to be under the auspices of the United States Steel Co. I believe there is such a corporation forming, but they have no contract from us at the present time.

Senator BANKHEAD. They have made no application?

Admiral BOWLES. They have been around talking about it, but they have not made a proposal yet.

Senator BANKHEAD. They are building a very large yard there.

Admiral BOWLES. So they say. They came to us and wanted to get priority certificates, but they have not gotten them from us.

They have already been around and they will undoubtedly get a contract if they make the offer that they said they would make.

Senator BANKHEAD. You know they are making their own steel there and carrying it down the river. Their transportation charges will be light in comparison with those of other shipbuilders. Their coal also goes down the river. They are located right on the bank of the river and the coal mines are right on the bank.

Senator JONES. Admiral, you indicated yesterday, by a statement with reference to the lumber situation both on the Pacific coast and the southern Atlantic coast, that there is a shortage of material to meet the demands of the existing program that is under contract. With reference to the Pacific coast, did you make any inquiries as to the cause of that situation?

Admiral BOWLES. No.

Senator JOHNSON. You have not any doubt about the supply of timber out there?

Admiral BOWLES. I was told that there was plenty of timber.

Senator JONES. But you have not made any investigation to see why the lumber is not actually available?

Admiral BOWLES. I know of the difficulty that we had in the beginning.

Senator JONES. What was that?

Admiral BOWLES. That was labor trouble.

Senator JONES. I think that has been satisfactorily adjusted. You have no reason for thinking that the supply will not be kept up?

Admiral BOWLES. Well, the supply is very slow in coming forward. I do not know anything of what the conditions are, Senator, but I do know the supply is slow.

Senator JONES. That is, that those who have contracts are not able to get materials as fast as they could use them? When was your latest report with reference to that situation on the Pacific coast?

Admiral BOWLES. Why, we have had one of our district officers from the Pacific coast here with us for the last week, and the most recent information has come from him.

Senator JONES. Who is that?

Admiral BOWLES. That is Blaine, our district officer in Seattle.

Senator JONES. Capt. Blaine?

Admiral BOWLES. Yes.

Senator JONES. Doesn't he give you any reason for this situation?

Admiral BOWLES. I did not obtain any from him; no.

Senator JONES. He is here now?

Admiral BOWLES. No; he is gone.

Senator NELSON. Did he leave a written report?

Admiral BOWLES. No; he did not. You see the wooden shipbuilding business has been taken away from me for the last two weeks, and so my conversation with him was on the subject of our steel contracts.

Senator JONES. Who has that in charge?

Admiral BOWLES. Mr. Heyworth.

Senator JONES. He is available?

Admiral BOWLES. He is available.

Senator JONES. Admiral, I want to ask you a question that I think would be proper in open session about this program that you say

you prepared. Did that program cover, for instance, on the Pacific coast the matter of supplying transportation facilities between that coast and Alaska in the way of barges and whatever ships might be necessary?

Admiral BOWLES. It did not take up the subject of barges, and I did not take up that particular matter.

Senator JONES. The general understanding is that the Alaska Railroad will be completed by next spring—into the coal fields at any rate—and that if we have transportation facilities we will be able to get coal from Alaska for naval purposes. Would it not be very important to take care of that?

Admiral BOWLES. I had heard that, Senator, and I had heard of the request for barges, but it seemed to me that the type of vessel we were building—cargo vesels—would be able to take care of this.

Senator NELSON. The road is not completed to the coal fields; that is only a branch road, and the road to the interior is not built at all beyond where the branch switches off to the Matanuska fields.

Senator JONES. They will have a road into the Matanuska fields by next spring.

Senator NELSON. I do not believe they will have it.

Senator JONES. I understand Secretary Lane says it will be put in there. Of course I do not know.

Senator JOHNSON. Did your program deal with the routes from the Pacific coast to the Orient?

Admiral BOWLES. This program that I made up, Senator, did not deal with routes at all. It simply dealt with the types and numbers of the different types of vessels that it seemed to me we ought to build and we could build. But in making up that program I was unable to take up anything but the emergency.

Senator JONES. In connection with that, Admiral, we have, for instance, to take coal around from the Virginia fields for the Navy on the Pacific coast. Don't you think it would be important in the emergency to relieve that situation and supply these coal demands from near home and save the ships that are necessary to go from the Atlantic to the Pacific, and also save the coal that is necessary to go from the Atlantic to the Pacific?

Admiral BOWLES. I do think so, Senator.

Senator JONES. But that was not taken into account in that program?

Admiral BOWLES. Oh, I think the types of vessels we are building are quite capable of taking care of that.

Senator JONES. Did your program include enough vessels to take care of that phase of the situation?

Admiral BOWLES. It did.

Senator JONES. And the same might be suggested with reference to oil. We need a lot of oil in Alaska and in the transportation of oil between that country and other points on the Pacific coast, and we should have vessels to furnish that transportation.

Admiral BOWLES. I have given particular attention to the subject of oil and its transportation, because I have considered it one of the important military elements; and if you will be kind enough to let me explain that situation to you in executive session I shall be very glad to do so.

Senator JONES. I just wanted to get the general outline of your program to see if you had taken care of those matters.

Admiral BOWLES. I have taken care of oil, because that has to be taken care of by specific ships.

The CHAIRMAN. This item about the price of Douglas fir you will furnish us later, Admiral?

Admiral BOWLES. I will.

The CHAIRMAN. We had better go into executive session now, unless there is something else.

Admiral BOWLES. I would like to say one thing, Senator, before you go into executive session. I will remind you I have had to deal with all the contracts made with the Fleet Corporation. Some of those contracts are poor contracts, from the point of view of the United States, and some of them are good ones. Some of the contractors, of course, are doing well and some are doing poorly; some are acting in good faith and some are, naturally, trying to take advantage of the Government.

Senator NELSON. Would you have any objection to telling us which is which of these classes?

Admiral BOWLES. I certainly would have objections.

Senator NELSON. In executive session?

Admiral BOWLES. Not in executive session.

Senator NELSON. I think we ought to know who are trying to hold up the Government in one way or another.

Admiral BOWLES. It has been my duty to deal pretty rigorously with that class; but I imagine that some of them will come here and have something to say, and I hope that the Senators will give me an opportunity to be present, to question them, and to make any proper answer on the part of the Government.

Senator BANKHEAD. I think that is entirely proper.

Senator SHERMAN. Admiral, the labor situation on the Pacific coast is reported to me as having been very acute, resulting in a suspension of operations of practically 50 per cent of the Washington State sawmills for at least six weeks during the past summer. It is reported further that the movement has been directed largely by the I. W. W. I am advised that the American Federation of Labor and the I. W. W. have now got together and are insisting on the application of the eight-hour day in the Northwest. The northwestern mill operators are faced by the alternative of eight hours work with ten hours pay. In all possibility the southern mill operators, in the yellow-pine country, must face the same condition, and they suggest that is a matter of great difficulty that is not yet settled.

Secretary of Labor Wilson and the Secretary of War have arranged a conference for some time early in January, I believe, with a view to arriving at some definite rule to be followed. This statement from a person who is interested out in that country would corroborate what you just stated a while ago.

I want to ask you whether in the bill you have suggested for commandeering certain local transportation companies you have considered the question of the conflict of authority between various departments. I ask that in view of the conditions in Davenport, Moline, Rock Island, and East Moline. The military authorities there have commandeered the local transportation company, running

across the Mississippi River to the Rock Island Arsenal, serving 7,000 or 8,000 employees at the arsenal, and the Rock Island Street Railway Co. at one end; and the Navy Department, which will have some very large contracts there in process of execution, has commandeered the other end, a local transportation line that has a connecting system. Many of those on the naval work and those at the arsenal use both lines coming and going. They have appealed to me to try to adjust the matter. I have been over to the departments, but there is a deadlock in the transportation there caused by the conflict of authority between the military and naval departments.

It would be well to keep that in mind, because there is a great deal of conflict between the departments that has resulted in embarrassment, not only here but among contractors. Would it not be well to try to adjust that by conferring with the departments here and provide against any further such conflict?

Admiral BOWLES. It certainly would, Senator. I have not put anything in this draft of the bill about requisitioning street railway transportation. I do not know how to draft such a bill, but I should like very much to urge that we have the authority, because such authority as now exists is with the War Department and the Navy Department, and we have no means, even in the places where we are entirely separate from them, of providing this transportation.

Senator SHERMAN. Would you suggest some way of settling these conflicts? The President, of course, is loaded down and could not do it.

Admiral BOWLES. Senator, I can suggest something to you in executive session.

Senator SHERMAN. Very well.

The CHAIRMAN. It apparently does not work to play both ends against the middle. If there are no other questions, we will proceed to executive session.

(After the consideration of executive business, and, at 6.15 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. on Monday, Dec. 31, 1917.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

MONDAY, DECEMBER 31, 1917.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m. in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Martin, Bankhead, Nelson, Jones, Sherman, Harding, and Johnson.

The CHAIRMAN. Mr. Hurley, the chairman of the Shipping Board, has addressed to me the following communication relative to housing facilities for shipyard employees, which will be inserted in the record at this point.

(The letter referred to is here printed in full, as follows):

UNITED STATES SHIPPING BOARD,
Washington, December 29, 1917.

Hon. DUNCAN U. FLETCHER,
Chairman Commerce Committee, United States Senate, Washington, D. C.

MY DEAR SENATOR: In view of the fact that the question of housing was only lightly touched upon during the time I was before your committee, I am constrained to write you the inclosed memorandum on the subject for the purpose of giving your committee the information which I think it should have in hand regarding the matter.

Very truly, yours,

EDWARD N. HURLEY, *Chairman.*

[Memorandum for Senate Committee on Commerce.]

One of the most perplexing problems of the war to the United States Shipping Board, the Army, and the Navy has been the lack of housing facilities for the enormously increased army of labor. The War Industries Board appointed a committee on housing, with Mr. Otto M. Eidletz, of New York, as chairman, to investigate and advise on this situation. This committee has investigated and advised on the immediate necessity of increased housing facilities, but owing to the fact that this problem had not yet reached a critical stage at the time Congress adjourned at its last session, and that no request had been made to Congress for an appropriation to provide necessary housing, Mr. Eidletz was unable to do more than suggest. The Shipping Board also had appointed an advisory committee which thoroughly investigated housing conditions at the shipyards and recommended some action toward relieving the situation, but all committees were more or less handicapped by no special financial provisions for taking care of this unlooked-for situation.

In November I appointed Mr. J. Rogers Flannery to see what could be done to help the housing troubles at the shipyards. The demand for immediate action became so apparent when the situation was thoroughly investigated that the Shipping Board decided to start construction at once at the most critical points. Hog Island will be the largest operation and $10,000,000 has been set aside for the erection of

thousands of houses to be erected in the vicinity of the Hog Island shipyard, Bristol, Pa., has also been assisted and a large community site is being constructed.

Sparrows Point, Md., has been in need of housing facilities, and the Shipping Board is helping the Bethlehem Shipbuilding Corporation (Ltd.) to purchase about 400 five and six room brick houses to care for the shiptards employees. Baltimore, which is about 10 miles from the shipyards, is cooperating with the United States Shipping Board to the fullest extent and is giving invaluable assistance in helping to place the shipyard employees in homes, rooms, and apartments.

Chester, Pa.; Wilmington, Del.; Newport News, Va.; Newburgh, N. Y., and many other shipbuilding points are being investigated and palns are under consideration for alleviating the housing situation.

We are treating the housing proposition from a very broad viewpoint, and in all cases where community sites are being planned is providing all the social, moral, and artistic features that will add to the social, moral, and physical well-being of the shipbuilding employees who will live in these communities. While protecting the investment of the Government, we are also adjusting the rents, purchase terms, etc., on such a basis that they will be within normal reach of the men who will occupy the houses.

The Shipping Board has invited the committee on housing to act as its advisory committee, has provided quarters for and is paying all salaries and clerical expenses of this committee, and is attempting to work out this housing problem along the very broad lines that it deserves, hoping that eventually Congress will realize the necessity of providing the necessary appropriation with which to take care of the housing necessities of all branches of the Government. The Shipping Board is building up this housing organization in conjunction with the committee on housing so that no time may be lost, and when Congress decides to appoint an independent housing commission with the necessary appropriation to take hold and construct the necessary housing for all branches of the Government, standard town plans will have been laid out and standard types of houses that will permit of standard dimension parts and standard materials will have been decided upon. Everything will be ready. All preliminary foundation work will have been completed. Immediate action can be assured.

About $35,000,000 will be required to carry out the contemplated housing program of the United States Shipping Board. A very considerable amount will also be required by the Army and the Navy. A bill is being prepared by the housing committee of the Council of National Defense, and I hope that it will be favorably acted upon by Congress, providing finances for the necessary housing. Housing facilities must be obtained for the large army of labor that must live where the Government's operations are being conducted on such an enormous scale, and should be coordinated and standardized in one commission for all branches of the Government.

Very truly, yours,

EDWARD N. HURLEY, *Chairman.*

The CHAIRMAN (continuing). I have also received a letter from Admiral Bowles, dated December 29, inclosing a statement containing information in regard to the American International Corporation taken from Moody's Manual, 1917 edition. That letter and the attached memorandum will also be printed in the record at this point.

(The letter referred to is here printed in full as follows):

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 29, 1917.

Hon. DUNCAN U. FLETCHER,
Chairman Commerce Committee, United States Senate,
Washington, D. C.

DEAR SENATOR FLETCHER: In response to the question addressed to me by Senator Johnson of California I am inclosing herewith a statement showing the information in regard to the American International Corporation taken from Moody's Manual, 1917 edition.

Very truly, yours,

F. T. BOWLES,
Manager Division of Steel Ship Construction.

AMERICAN INTERNATIONAL CORPORATION.

Incorporated November 23, 1915, in New York, under a charter broad enough to authorize it to engage in any kind of business (except banking), subject to the restrictions provided by the laws of the States and countries in which it may operate. The main object of the formation of the corporation is to create facilities for the successful promotion of American commerce and business in foreign countries. It will be its endeavor to advance the interests of American overseas trade; to develop new enterprises abroad; to finance existing enterprises and to take over, if offered, investments heretofore made by people in European countries. The corporation has its own representatives in Argentina, Great Britain, France, Russia, and China. While not controlled by the National City Bank, New York, it is closely affiliated in interest and can avail itself of the experience that institution has acquired in the establishment of foreign branches. Under the powers conferred by the Federal reserve act the National City Bank has established branches in Argentina, Brazil, Chile, Uruguay, the West Indies, Italy, and Russia and plans are under way for the establishment of other branches in the principal financial centers of South America. Through the acquisition of the International Banking Corporation by the National City Co., the bank has branches in Japan, China, Philippines, Panama, Colombia, and India. The American International Corporation proposes to utilize the information gained through these branches to further the interests of American business and to give the initial impetus to American enterprise in fields not hitherto explored by it.

The following are some of the varied interests of the corporation:

Pacific Mail Steamship Co.—In connection with its associates, W. R. Grace & Co., the corporation in December, 1915, acquired control of the Pacific Mail Steamship Co. (See General Index.)

Allied Machinery Co. of America.—In February, 1916, company acquired the entire capital stock (consisting of $100,000 common and $100,000 preferred) of the Allied Machinery Co. of America, which conducts an export business in machine tools, with its own offices in France, Italy Switzerland, and Russia.

Uruguayan contract.—In March, 1916, the American International Corporation, in association with Messrs. Stone & Webster and the Ulen Contracting Co., took a contract to construct waterworks and sewerage systems in the towns of Salto, Paysandu, and Mercedes, Uruguay. The corporation agreed to take $4,000,000 6 per cent gold bonds of the Uruguayan Government in payment for this work, which is now well under way.

Latin-American Corporation.—The importance of thoroughly investigating propositions in South America which have been presented, and the necessity of properly supervising the work during the construction period, led to the formation of the Latin-American Corporation, in which the American International Corporation and Messrs. Stone & Webster are jointly interested.

Work in Russia.—On August 31, 1916, Frederick Holbrook, an engineer and head of the Hoobrook, Cabot & Rollins Corporation, was chosen vice president of the American International Corporation to represent its interests in Petrograd, Russia. The corporation has received orders from the Russian Government for a large amount of steel rail and other railway equipment.

Rosin & Turpentine Export Co.—This company was incorporated in June, 1916, to aid American manufacturers to investigate and develop the rosin and turpentine export business. In April, 1917, this company increased its capital stock from $300,000 to $800,000.

International Mercantile Marine Co.—During 1916 an interest was acquired in the securities of the International Mercantile Marine Co. (see General Index), which aided that company to discharge its receiver on October 6, 1916, and place its affairs in the hands of a board of directors.

United Fruit Co.—During 1916 the corporation also acquired an interest in the United Fruit Co. (See General Index.)

American International Terminals Corporation.—In July, 1916, this company was formed with $100,000 capital for the purpose of studying the problems in connection with the development of the terminal facilities of the Port of New York.

China Corporation and Siems-Carey Railway & Canal Co.—These two companies were organized in July, 1916, for the purpose of investigating the possibility of negotiating contracts for the improvement of canals and construction of railroads in China. The American International Corporation holds the controlling interest in these companies and the Siems-Carey Co., an engineering and contracting firm of St. Paul. Minn., the remainder. A contract was signed on September 30, 1916, with the Chinese Government for the construction of 1,100 miles of railway in China.

Carter, Macy & Co. (Inc.).—In August, 1916, the American International Corporation became interested in this concern, an old established firm doing business in the importation and sale of teas and having offices in China, Japan, India, and Ceylon. The American International Corporation provided additional capital and acquired a controlling interest in the business, and in this manner acquired representation in the Orient.

New York Shipbuilding Co.—The corporation in November, 1916, purchased the entire property of the New York Shipbuilding Co., Camden, N. J., and invited the International Mercantile Marine Co., W. R. Grace & Co., and the Pacific Mail Steamship Co. to join in shipbuilding operations. A new corporation, the New York Shipbuilding Corporation, has been organized in which the American International Corporation owns the controlling interest and the other two companies the remainder. In addition to $20,000,000 of contracts for ships under construction, a contract has been received for the construction of two battleships for the United States Government, for $22,900,000.

Capital stock.—Authorized and outstanding, $49,000,000 common and $1,000,000 preferred ("managers' shares"); par, $100. Of the stock, $25,000,000 common was set aside to be offered to stockholders of the National City Bank, New York, to an amount equal to their holdings of that institution's stock as of December 1, 1915. Subscriptions were to be made 10 per cent forthwith, 10 per cent January 15, 1916, and the remaining 80 per cent at the discretion of directors. Further installments of 10 per cent each were called payable June 9, July 10, and August 10, 1916, making the stock 50 per cent paid up. Preferred stock is entitled to receive out of surplus profits, dividends at the same rate as that paid on common, until 7 per cent shall have been paid or declared on both classes in any one year; thereafter preferred stock shall be entitled to receive one-fifth of any further distribution of surplus during that year and common the remaining four-fifths. Upon liquidation of the corporation and distribution of its assets, preferred shall be entitled to receive an amount equal to the par value thereof, before any distribution is made on the common stock, then common shall be entitled to receive an amount equal to the par value thereof; after which preferred stock shall be entitled to receive one-fifth of the assets then remaining, and the common the remaining four-fifths. Transfer agent: National City Bank, New York. Registrar: Farmers' Loan & Trust Co., New York. Listed on New York curb. Initial dividends of 75 cents per share on both preferred and common stocks were paid December 30, 1916.

Consolidated income account, year ended December 31, 1916.—Earnings from operations, $3,337,450; miscellaneous expenses, $908,278; foreign and domestic taxes, $447,656; net earnings, $1,981,516; interest and dividends received, $502,427; total income? $2,483,943; dividends, $375,000; surplus for one year, $2,108,943.

Consolidated balance sheet, Dec. 31, 1916.

ASSETS.		LIABILITIES.	
Investments, bonds, stocks, etc.	$23,226,559	Common stock	$24,500,000
Furniture and fixtures	40,883	Preferred stock	500,000
Cash and call loans	2,954,313	Accounts payable	2,960,339
Merchandise inventories	2,167,515	Reserve for taxes	521,262
Accounts receivable and advances	1,864,818	Surplus	1,923,539
Interest accrued receivable	148,201		
Unexpired insurance	2,851		
Total	30,405,140	Total	30,405,140

Consolidated statement of working capital, Dec. 31, 1916.

CURRENT ASSETS.		CURRENT LIABILITIES.	
Cash and call loans	$2,954,313	Accounts payable	$2,960,339
Merchandise inventories	2,167,515		
Accounts receivable and advances	1,864,818		
Interest accrued receivable	148,201		
Total	7,134,847	Total	2,960,339

Net working capital, December 31, 1916, $4,174,508.

Officers.—F. A. Vanderlip, chairman of board; C. A. Stone, president; G. F. Baldwin, senior vice president; H. D. H. Connick, Philip W. Henry, Robert F. Herrick, Frederick Holbrook, William S. Kies, R. B. Sheridan, Willard Straight, R. P. Tinsley, vice presidents; Cecil Page, secretary; T. W. Streeter, treasurer; K. F. Clark, assistant secretary; Percy Mayes, assistant treasurer, New York.

Executive committee.—F. A. Vanderlip, C. A. Stone, O. H. Kahn, Ambrose Monell, P. A. Rockefeller, T. N. Vail, William Woodward.

Directors.—J. Ogden Armour, C. A. Coffin, W. E. Corey, Robert Dollar, J. P. Grace, R. F. Herrick, Pierre S. duPont, Otto H. Kahn, R. S. Lovett, Ambrose Monell, H. S. Pritchett, Percy A. Rockefeller, John D. Ryan, W. L. Saunders, J. A. Stillman, C. A. Stone, Guy E. Tripp, T. N. Vail, F. A. Vanderlip, E. S. Webster, A. H. Wiggin, Beekman Winthrop, William Woodward.

Annual meeting, first Wednesday in April.

General office, 120 Broadway, New York.

New York Shipbuilding Corporation (controlled by stock ownership).—Incorporated November 28, 1916, in New York; successor to New York Shipbuilding Co. (see Manual for 1916, industrial and public utility volume, p. 3149). The entire property of the latter company had been purchased in November, 1916, by the American International Corporation, in connection with the International Mercantile Marine Co., W. R. Grace & Co., and the Pacific Mail Steamship Co. The American International Corporation owns a majority of the stock of the new corporation. The arrangement between the four concerns participating in the enterprise provides that a certain portion of the capacity of the yard shall be devoted to the construction of ships for these companies at cost plus a percentage basis. Business is the manufacture and construction of ships, marine engines and boilers. The corporation has a large modern shipbuilding plant at Camden, N. J., the property including 163½ acres of land, with 4,700 feet of water front on the Delaware River. There are five shipways equipped and two additional large ways under construction.

Capital stock.—Authorized and outstanding, 200,000 shares of no par value. A majority of the stock is owned by American International Corporation.

Bonded debt.—$7,500,000 first sinking fund 5s; due November 1, 1946. Authorized, $25,000,000.

Officers.—George J. Baldwin, chairman of board; S. M. Knox, president; H. A. Magoun, first vice president; N. de Taube, second vice president; J. T. Wickersham, secretary and treasurer; Cecil Page, assistant secretary; A. G. Connell, assistant secretary and assistant treasurer; A. D. Brigham, assistant secretary; Percy Mayes, assistant treasurer; H. J. Smith, assistant treasurer.

Executive committee.—George J. Baldwin, P. A. S. Franklin, Lawrence H. Shearman.

Directors.—George J. Baldwin, Joseph A. Bennett, P. A. S. Franklin, Joseph P. Grace, E. W. Harden, Robert E. Herrick, W. S. Kies, S. M. Knox, Ambrose Monell, William F. Morgan, James H. Perkins, L. H. Shearman, Charles A. Stone, E. F. Swenson, H. H. Wehrhane.

Annual meeting, third Wednesday in March, at 120 Broadway, New York.

General office, Camden, N. J.

(Moody's Manual of Railroad and Corporation Securities, 1917. Industrial section, pp. 74, 75, 76, 77.)

American International Corporation (see also statement on p. 74).—Common stock listed.—Common stock of company was listed on New York Stock Exchange on July 5, 1917.

(Moody's Manual of Railroads and Corporations Securities, 1917. Industrial section, p. 2549.)

The CHAIRMAN (continuing). When we adjourn to-day, if there is no objection, we will adjourn to meet on Wednesday next, January 2, 1918, at 2 o'clock p. m.

Senator JONES. I suggest, Mr. Chairman, that we then have Admiral Bowles resume the stand in connection with one or two matters.

The CHAIRMAN. Yes; we can have Admiral Bowles notified to be here on Wednesday afternoon at 2 o'clock.

Mr. Page, we will now proceed with you. You are one of the commissioners of the Shipping Board?

STATEMENT OF HON. CHARLES R. PAGE, MEMBER OF THE UNITED STATES SHIPPING BOARD.

Mr. PAGE. Yes, sir; and I am also a trustee of the corporation.

The CHAIRMAN. When did you take office, Mr. Page?

Mr. PAGE. Well, I was sworn into office in Seattle, on I think it must have been about the 18th or 20th of October. I arrived here on the 26th, and took up my duties on the 27th.

The CHAIRMAN. Will you give the date and place of your birth, and the place of your residence, Mr. Page?

Mr. PAGE. I was born in San Francisco, Cal., on the 24th of May, 1878. My place of residence is in Alameda, Cal.

The CHAIRMAN. What had been your business or occupation prior to becoming a member of the Shipping Board?

Mr. PAGE. Well, after leaving college, I went to sea for a short time, and then went into the business of marine insurance; I have been in the marine insurance business practically ever since.

Senator NELSON. In what capacity did you go to sea?

Mr. PAGE. I went to sea as a passenger in a trading ship, for the purpose of acquainting myself, as well as I could, with the practical handling of a vessel, and with navigation. At that time it was my purpose to go into admiralty law practice. So, although I was a passenger in that ship, I did much of the work——

Senator NELSON (interposing). Was it much of a trip that you made?

Mr. PAGE. Six months.

Senator NELSON. What was the route of the ship?

Mr. PAGE. I went from New York out to Yokohama, around the Cape of Good Hope. After that experience, returning to the United States, I went into marine insurance and spent about six months, I believe it was, in my father's office; he was an admiralty attorney; and I then went into the marine insurance business and I have spent my entire life in that, with the exception of about six months, which I spent with a firm of shipowners in San Francisco.

The CHAIRMAN. What firm was that?

Mr. PAGE. Hind, Rolph & Co. was the firm. I have been with the Firemen's Fund Insurance Co. of San Francisco ever since.

The CHAIRMAN. Does that business of marine insurance require a knowledge of the construction of ships?

Mr. PAGE. It does not require the knowledge of an expert; it calls for a practical working knowledge of those things, not the exact knowledge of a technical expert; no.

Senator NELSON. Do they not base insurance largely on Lloyds, or what I would call the "American Lloyds"?

Mr. PAGE. The insurance of large over-seas vessels is basedn upo their classification, principally with Lloyds register, the British classification society, but there are a great number of other factors also.

Senator NELSON Well, we have another in this country; what is it called?

Mr. PAGE. The American Bureau of Shipping is the corporate name, I believe

Senator NELSON. And insurance is based upon the rating of those two boards, is it not?

Mr. PAGE. That is one of the important elements that enter into marine risks——

The CHAIRMAN. They classify the risk?

Mr. PAGE. They classify the risk—may I explain in detail what I understand to be the purpose of those societies?

The CHAIRMAN. Yes; certainly.

Mr. PAGE. They exist for the examination of plans for the building of ships, for the approval of the material that goes into the ships, and for the supervision of the building of ships. After the ships have been built under the supervision of an officer of one of those societies they receive a class in that society, in that register; it is technically known as a register society. In order to maintain the class, the owner of the ship has to submit his vessel to surveys at definite periods and has to make repairs which are satisfactory to the society.

Now, the marine underwriter who is asked to insure a risk on a vessel that he does not know and has never seen, refers to the book which is published by these societies, containing all the particulars of the vessel, the length, beam, depth, tonnage, power, master, owners, all the particulars; and she carries in that book a definite rating. That is one of the important elements upon which the judgment of the underwriter is based.

The society in no sense controls the classification of risks, the determination of rates, or anything of that sort. It is a bill of health for a vessel.

The CHAIRMAN. The classification of the ship itself?

Senator NELSON. Are you accustomed to going and examining ships personally before you effect an insurance?

Mr. PAGE. Well, it is very difficult to answer that question categorically. It depends a great deal upon the vessel and the trade for which she is proposed. It is quite customary to accept risks on the larger and better vessels without an examination; the smaller and somewhat inferior vessels, or the vessels in the more dangerous trades, are generally examined by a technical representative of the underwriter.

The CHAIRMAN. Did you have much to do with the American Bureau of Shipping?

Mr. PAGE. Not a very great deal, no. The American Bureau of Shipping has not been nearly so prominent in the business of marine insurance as the Lloyd's Register of British and Foreign Shipping, which is the great British Society

The CHAIRMAN. Yes, I understand.

Mr. PAGE. I have had dealings with their representatives, however.

The CHAIRMAN. The effort to get the American Bureau of Shipping somewhat on the basis of Lloyds is comparatively recent, is it not?

Mr. PAGE. Yes; it is within the last year or two that new blood is being infused into it.

The CHAIRMAN. Do you come in contact with the American Bureau of Shipping now in your work?

Mr. PAGE. In my work here?

The CHAIRMAN. Yes.

Mr. PAGE. I have not.

The CHAIRMAN. What have you to say regarding the present organization of the Shipping Board and the Emergency Fleet Corporation? Do you approve, or would you make any changes?

Mr. PAGE. As far as the Fleet Corporation is concerned, I may say that when I came to Washington, about the 1st of November, that was previous to the amendment of the by-laws; so that I have had a share of the responsibility for the amendment of the by-laws which I conceive to be in the logical and proper direction. I believe that the Emergency Fleet Corporation is in a good, healthy condition; I think its by-laws and its organization are such now that—well, almost absolute powers are in the hands of its president.

Senator NELSON. What branch of the work, if any, is assigned to you?

Mr. PAGE. There has been no definite assignment of work to me, Senator Nelson; and my activities, because of the fact that I have had to do with shipping and shipping men, have been somewhat catholic. I have had to do with a great many ship owners who have come to the board to deal with questions arising under the requisitioning program. I have especially had charge, during the last month, of applications to transfer vessels to the American flag from foreign flags. I have had something to do with negotiations looking toward the acquisition of foreign tonnage now in foreign ports, and I have had something to do with the board's plans to man vessels.

The CHAIRMAN. Well, coming back to the original question, will you state whether or not you approve of the present organization of the Shipping Board and the Emergency Fleet Corporation?

Mr. PAGE. I do.

The CHAIRMAN. If there are any changes which, in your judgment, ought to be made in either of those organizations the committee will, of course, be very glad to hear your suggestions on that point.

Mr. PAGE. I should not hesitate to offer them, but I think that the Fleet Corporation has been put into a thoroughly healthy condition.

The CHAIRMAN. Did you have anything to do with the establishment of these plants at Hog Island and Bristol and Newark, of the International, the Merchant, and the Submarine companies, respectively?

Mr. PAGE. Nothing whatever.

The CHAIRMAN. I was going to ask you about the advantages of establishing those great enterprises close together in that particular region, and the disadvantages. Perhaps you have some views on that subject anyhow?

Mr. PAGE. I do not know as I quite understand the nature of your question.

The CHAIRMAN. What would you say were the advantages in establishing a great shipyard at Hog Island, at enormous expense to the Government, and another at Bristol, Pa., less than 50 miles away, and another at Newark, N. J.? Do you think that a wise thing to do, all conditions considered? The crowded condition of that region as to industrial activities, the difficulty of housing workmen, and the climatic conditions—the fact that in certain months of the year they can not work in that climate, particularly out in the open on ships—and transportation questions also; would you regard it as a wise thing to do to establish those three plants there?

Mr. PAGE. I do not believe that I am sufficiently familiar with the reasons for having established those plants there to give you an opinion that would be entitled to very much consideration on that point. Offhand, I would say that it seems to me that in establishing shipyards of that kind they must be established close to rail connections. Obviously, they must be on deep water, and they must be in close proximity to a labor market. Now, the particular conditions that governed these cases I am not familiar with.

Senator NELSON. What shipyards have you on the Pacific coast? Will you please name them and give their localities?

Mr. PAGE. Since I left California I understand that there has been one established at San Diego, or one projected at San Diego. I am starting at the south now.

Senator NELSON. Has there been a contract made with them? Has the Shipping Board or the Fleet Corporation made a contract with that company?

Mr. PAGE. I know nothing of it officially. I have not seen any record of it in our reports, but I have seen in the newspapers——

Senator NELSON (interposing). What other shipyards are there on the coast?

Mr. PAGE. At Long Beach, which is the next most southerly port——

Senator NELSON (interposing). Is that for steel or for wooden ships?

Mr. PAGE. Both of these would be for steel ships; there are two; what is known as the California Shipbuilding Co., which was established for the purpose of building submarines for the Navy; it is an adjunct of the Electric Boat Co., I believe. It has now, as I recall, three contracts for building merchantmen; and the Craig Shipbuilding Co., which has no contracts for the Government, but which has a couple of small steel vessels, about 3,500 or 4,000 tons, under requisition.

Senator NELSON. Are those last shipyards that you have named in San Francisco Bay?

Mr. PAGE. No, they are at Long Beach, which is near Los Angeles; it is 45 minutes from Los Angeles.

Senator NELSON. Yes.

Mr. PAGE. And at San Pedro, which is a contiguous port, also about 45 minutes from Los Angeles.

Senator NELSON. That is another place where they have tried to make a harbor out of the whole cloth, is it not?

Mr. PAGE. That is right across the bay; they have a good harbor there now.

Senator JOHNSON. They made the harbor, too, Senator Nelson.

Mr. PAGE. They have two small wooden shipyards there. I saw all of these yards before I came here.

Senator NELSON. Take the shipyards at San Pedro; is there any timber in that vicinity?

Mr. PAGE. None at all.

Senator NELSON. And they are building wooden ships?

Mr. PAGE. Yes.

Senator NELSON. Where does that timber come from—from Washington?

Mr. PAGE. All of it comes from the Columbia River, or Washington.

Senator NELSON. What other yards are there?

Mr. PAGE. At San Pedro there is also the Los Angeles Shipbuilding & Dry Dock Co., whose plant is located on what was practically a marsh when the contract was let last May, and they already have launched a ship. They have four ways.

Senator NELSON. Have they a contract with the Government?

Mr. PAGE. They have 14 ships under contract, according to my recollection.

Senator NELSON. Are they wood or steel?

Mr. PAGE. They are steel. It is an excellently organized plant.

Senator NELSON. Let me ask you about that: Was that yard in existence before the Government contract was made?

Mr. PAGE. No.

Senator NELSON. The yard was a part of the contract?

Mr. PAGE. Well, the Government is not paying for the yard.

Senator NELSON. But there was no yard before the contract was made. The Government is not advancing any money for it?

Mr. PAGE. No; but if it had not been for the Government there would not have been a yard there, because there was no reason for having shipbuilding facilities there, except to carry out the Government's program and meet the requirements of the Government.

The CHAIRMAN. The company builds its own plant?

Mr. PAGE. The company builds its own plant, and the Government is not interested in plant extension, or plant projection, or anything; it is without assistance. It has 14 contracts, I believe. They first had 4, and I believe they now have 10 more.

Senator NELSON. For steel vessels?

Mr. PAGE. For steel vessels of 8,800 tons each.

The CHAIRMAN. And you say they are progressing very well?

Mr. PAGE. Excellently.

Senator JOHNSON. One ship has been launched, has it not?

Mr. PAGE. They have launched a ship in December.

Senator JOHNSON. And three of them have proceeded almost to completion, have they not?

Mr. PAGE. Yes.

Senator NELSON. Going north, what is the next shipyard?

Mr. PAGE. San Francisco Bay is the next. In San Francisco Bay there are quite a number of shipbuilding plants; principally steel. The largest is the Union Iron Works, which has five slips in San Francisco and five or six across the bay.

Senator NELSON. Have they contracts with the Government?

Mr. PAGE. Not with the Emergency Fleet Corporation.

Senator NELSON. That is what I mean.

Mr. PAGE. They have with the Navy; but they were so largely filled up on private contracts; as yet, they have quite a lot of private contracts on their hands, so that the Fleet Corporation has not been able to place anything with them.

Senator NELSON. Those private contracts are a part of what the Government has requisitioned, are they not?

Mr. PAGE. Yes; the Government has requisitioned them; but when you said "contracts," I thought you meant initial contracts.

Senator NELSON. What others are there?

Mr. PAGE. Then, in addition to the Union Iron Works, which is a very well-organized plant, there is the plant of the Moore & Scott Iron Works, which has a number of vessels requisitioned, and I think they have contracts with the Fleet Corporation now for, according to my recollection, 10 ships more.

Senator NELSON. Steel or wooden ships?

Mr. PAGE. Steel; they are ships of 9,400 tons.

Then there is another plant, the Hanlon Dry Dock & Shipbuilding Co. which has two requisitioned contracts.

Then there is a wooden shipyard up the bay, which has two or three—they have been invited to tender for two wooden ship contracts; and since I left California there has been another shipyard established up at Benicia, which I believe has contracts for the Fleet Corporation. That would be the Pacific Coast Ship Building Co., and it has ten contracts, but as yet it is nothing but a site; there is no yard established there yet.

Senator NELSON. There is no yard there yet; it has a contract. Has the Government helped to build the yard?

Mr. PAGE. I am not familiar with the conditions as to that yard.

Senator NELSON. Well, proceed north. What is the next ship yard?

The CHAIRMAN. Are those wooden ships?

Mr. PAGE. They are steel ships; 8,800 ton cargo ships.

The next yard is at Humboldt Bay, where there are four ships being built. The Hammond Lumber Co. has a contract there that calls for four wooden ships.

Senator NELSON. Were those yards already established?

Mr. PAGE. The ones I have just referred to?

Senator NELSON. The ones at Humboldt Bay?

Mr. PAGE. Yes.

Senator NELSON. They were in existence before?

Mr. PAGE. Yes, they have built small wooden vessels there for a great many years.

Senator NELSON. They were mainly coasters, I suppose?

Mr. PAGE. Yes, coasters and similar small vessels.

The next yard to the north of that is at Coos Bay, in Oregon.

Senator NELSON. Was there a yard there before the Government let the contract?

Mr. PAGE. Yes.

Senator NELSON. A wooden shipyard?

Mr. PAGE. A wooden shipyard; it is right in the heart of the lumber district.

Senator NELSON. Yes; there is plenty of lumber around there.

Mr. PAGE. Yes, plenty of lumber of all sizes. The firm of Kruse & Banks have been building ships for a good many years there on the Pacific Coast.

Senator NELSON. Have we a contract with them—and when I say "we" I mean, of course, the Emergency Fleet Corporation?

Mr. PAGE. Yes, for four wooden ships.

The next yard north of that is at a place called Tillamook, which has a small harbor in the timber region; they have a contract for one ship.

Senator NELSON. Was there a yard there before the contract was made?

Mr. PAGE. There was not a yard there; there was a man there who built barges and small bessels; I think that he is the man that has this contract. I have not seen that place.

Then the next point north of that is the Columbia River. On the Columbia River—I have not been to Astoria recently, but my recollection is that there are two, if not three, wooden ship yards there with contracts from the Fleet Corporation.

Senator NELSON. That is between the mouth of the Columbia and the Willamette River?

Mr. PAGE. Yes; but it is almost at the mouth of the river; it is the first port that you strike on the Columbia River.

Senator NELSON. You say there are two yards there?

Mr. PAGE. Two, and perhaps three.

Senator NELSON. Are they wooden shipyards?

Mr. PAGE. They are wooden shipyards.

Senator NELSON. What is the name of the company?

Mr. PAGE. The McEachern Ship Co., I think it is called; it has contracts for 10 or 12 wooden ships. And there are one or two others there. My information on that point is not exact. Proceeding up the river, the next place is called Columbia City.

Senator NELSON. That is on the Willamette River, is it not?

Mr. PAGE. No; still on the Columbia River.

Senator NELSON. I mean, is it above or below the junction of the Willamette River?

Mr. PAGE. Below; there is a yard there owned by the Sommerstrom Shipbuilding Co., with contracts for four wooden vessels, of the Hough type, according to my recollection.

The next yard is the St. Helens Shipbuilding Co., which is pretty close to the junction, I think, of the Willamette and Columbia Rivers.

The CHAIRMAN. What do you mean by the Hough type of vessels?

Mr. PAGE. There are several types of wooden vessels that have been contracted for by the Fleet Corporation. The type that is predominant is known as the Ferris type, a 3,500 ton vessel, which was deisgned by Mr. Ferris. There is also a rather peculiar type of vessel, that, in technical language would be known as a "sharp scow" like a scow schooner; it has a very peculiar under-water body: it was designed by a man named Hough on the Pacific coast, for the lumber trade, primarily. The advantage claimed for it is that it can use short timbers, and that it does not call for so much hand work as ordinary wooden-ship building, so that you can figure to use house carpenters and bridge builders on it. It is a very distinct and rather extraordinary looking type of vessel, and there are quite a number of those contracted for on the Pacific coast.

The CHAIRMAN. Of what tonnage are those vessels?

Mr. PAGE. About 3,500 tons. Then there are a few of the wooden-ship builders who are being permitted to build on the types that they had themselves developed in commercial practice. I think this was a very wise permission; and some of those vessels, notably the ones produced at Gray's Harbor, run up to 4,000 tons. So you have those two distinct types, the Hough type and the Ferris type, put out by the Corporation and——

Senator NELSON. (Interposing). The Ferris type is the normal type, the type commonly used, is it not?

Mr. PAGE. Well, it is the type of which most will be produced.

Senator NELSON. That is what I mean. I call it the "normal type" as distinguished from the others.

Mr. PAGE. Yes; the others are exceptions.

Senator NELSON. Yes; that is what I thought. Now, proceed further along there.

Mr. PAGE. Well, the St. Helens Shipbuilding Co., at St. Helens, Oreg., is an old established concern.

Senator NELSON. Is that on the coast or on the Columbia River?

Mr. PAGE. It is on the Columbia River. My recollection is that it is just below the confluence of the Columbia and the Willamette Rivers.

Senator NELSON. Have they any contracts?

Mr. PAGE. Two.

Senator NELSON. Two contracts for wooden vessels?

Mr. PAGE. For wooden vessels, two of the Ferris type ships. They are an old established yard; they have been building for a number of years. Then, at St. Johns, Oreg., which is on the Willamette River, there is the Grant-Porter-Smith Corporation, a corporation made up of some railway contractors and others; I do not think they have had any previous experience in shipbuilding; they have contracts for, I think, about 10.

Senator NELSON. Ten wooden ships?

Mr. PAGE. Ten wooden ships of the Hough type.

Senator NELSON. And they had never been in the business before they got these contracts?

Mr. PAGE. I think not.

Senator NELSON. They were organized——

Mr. PAGE. After the emergency.

Senator NELSON. They were organized for this purpose?

Mr. PAGE. Yes. I find quite a number there, just as there are in the steel business on the Pacific Coast, who never were in the shipbuilding business before in their lives. They came in——

Senator NELSON (interposing). As a matter of patriotism?

Mr. PAGE. From a desire to help out.

Senator NELSON. Yes.

Mr. PAGE. They are building a considerable ship yard there which is financed by the Government.

Senator NELSON. The Government advanced the whole thing?

Mr. PAGE. The Government is paying the cost——

Senator NELSON (interposing). Building the yard for them, practically?

Mr. PAGE. Not only practically; in fact.

Senator NELSON. In fact?

Mr. PAGE. They are the agents of the Government in building that yard.

Senator NELSON. Yes. Now, we found out about that Delaware corporation, that they are the agents of the Government; they get $6,000,000 or $7,000,000. Do you know how much these people are to get for allowing their name to be used in connection with this yard?

Mr. PAGE. I do not, Senator Nelson; I am not familiar with the details of the contracts. I know that they have got their ships on the lump-sum basis; my recollection is $85 a ton, which is very much less than the——

Senator NELSON (interposing). Average.

Mr. PAGE. Average for the wooden ships.

Senator NELSON. But the Government builds a plant for them, and after it is built, I suppose it gives it rent free, does it not?

Mr. PAGE. It belongs to the Government after they are through.

Senator NELSON. Do they advance anything toward the construction of it, or does the Government pay for the wages and pay for the material as they go along with the work?

Mr. PAGE. My understanding—but I would like to have you appreciate that I have not examined this contract myself—my understanding is that the Government meets the pay rolls and the material bills, and everything, as they go along.

Senator NELSON. Yes; it is like this other contract of the concern in Delaware?

Mr. PAGE. I think so.

Senator NELSON. The only difference is that this is for wooden ships and the Delaware contract is for steel ships?

Mr. PAGE. I think so.

The CHAIRMAN. The American-International Co.?

Senator NELSON. The American-International Co.; yes, that is what I was thinking of.

The CHAIRMAN. What is the name of that company you were just speaking of, at St. Johns, Oreg.?

Mr. PAGE. The correct name, I believe, is the Grant-Smith-Porter-Guthrie Co.

Senator BANKHEAD. Do you know what percentage of profits they get on the cost of the work?

Mr. PAGE. I do not, Senator Bankhead.

Senator BANKHEAD. Is it 10 per cent?

Mr. PAGE. I really do not know; I can not answer that question.

Senator BANKHEAD. They get some percentage, do they not?

Mr. PAGE. Oh, yes; I should judge that they figured to get 10 per cent. But I am not familiar with the contract myself.

Senator NELSON. Will you be kind enough to look that up, and let the committee know how much rake-off they get on the deals? I do not mean now, but you can put it in the record afterwards.

Senator HARDING. Mr. Chairman, we have those contracts on file with the committee.

Mr. PAGE. Yes; they are on file with the committee.

Senator NELSON. Yes, I know; but you can get the figures better than we can.

Senator JONES. We have a synopsis of those contracts.

Senator NELSON. Not of that particular contract, I think.

Senator JONES. I understood that we had a synopsis of all these contracts.

Senator NELSON. We have a schedule of them, but I believe that Admiral Bowles only gave us three of the typical contracts.

Senator JONES. I understood that he gave us a synopsis of all of them.

Senator NELSON. Perhaps there is that information on file. But what we want to know, Mr. Page, is how much that company gets for practically using their name and reputation, and whatever it is

Mr. PAGE. Yes; they are people with an organization, not a shipbuilding organization, but a large contracting organization.

Senator NELSON. Yes. We want to know what the cost of getting the use of good names for the Government is.

Senator HARDING. Mr. Page, you are connected more or less with the operating department of the Shipping Board, are you not?

Mr. PAGE. No, sir; I am not.

Senator HARDING. Are you at all familiar with that phase of the work?

Mr. PAGE. Only in the most general way. Do you mean with the actual operations of the board?

Senator HARDING. Well, perhaps I can get at what I want by asking further questions. Do you know whether we have increased or decreased the efficiency of the ships requisitioned in the trans-Atlantic service?

Mr. PAGE. I do not, Senator Harding. I can only venture an opinion.

Senator HARDING. Do you know whether the time of the cargo carrier has been lengthened or shortened since coming under the direction of the board?

Mr. PAGE. No; I do not know as to that. I have not seen the period of the vessels' stays in port. I think, if I may express an opinion rather than a statement of my own knowledge, that it would be natural at first that there should be a slow-up, due to the change in the existing organizations.

Senator HARDING. Are you at all familiar with the tie-up on the other side—the inability to disembark our cargoes?

Mr. PAGE. In France?

Senator HARDING. Yes.

Mr. PAGE. No, sir; I am not; only the merest hearsay.

Senator HARDING. You know that condition is bad?

Mr. PAGE. I have heard that it is a very serious condition. I have heard of vessels being delayed 20 or 30 days.

Senator HARDING. You are not prepared to assign the reasons therefor?

Mr. PAGE. No, sir; because I do not know.

Senator HARDING. Who would be the best authority on that subject in the Shipping Board?

Mr. PAGE. I should judge that Mr. Colby would probably know more about that at first hand than anybody else; and if not Mr. Colby, Mr. Carry is the man through whom all of the information passes.

Senator NELSON. If you will pardon me, Senator Harding, I noticed in the newspapers a short while ago an account of where our troops had been kept from landing 15 days; and it was said that that was because they were using all of the cars and everything of the kind to ship troops down to Italy.

Senator HARDING. I wanted to ask another question, Mr. Page: Do you have anything to do in your department with the inspection bureau?

Mr. PAGE. Do you refer to the men who are inspecting construction?

Senator HARDING. No the men who are passing upon the dependability of a ship for departure; the regular bureau of inspection.

Mr. PAGE. No; I have nothing to do with that; that would also come under the Director of Operations, Mr. Carry.

Senator NELSON. I presume that would come under what they call the Steamboat-Inspection Service.

Mr. PAGE. No, the Steamboat Inspection Service only examines into the vessel when she—for instance, at stated periods, when her boilers have to be examined; when her certificate of inspection expires, the Steamboat-Inspection Service examines the condition of the vessel, but under ordinary conditions they do not, unless there is some complaint about her condition; then they would examine it.

Senator HARDING. Now, that is what I am trying to get at. This bureau passes upon the eligibility of a ship to make a voyage, does it not—the Steamboat-Inspection Bureau?

Mr. PAGE. No; the Steamboat-Inspection Bureau, or department, or whatever it is known as, is a bureau of the Department of Commerce. The scope of its duties is two-fold: One is to attend to the physical condition of the ships, and the other is to supervise the personnel. Every American ship is licensed. She is licensed to carry a certain number of passengers; she is licensed to have a certain steam pressure in her boilers; she has to have a certain number in her crew. When a vessel comes out from the builder's hands she is examined by the Steamboat Inspectors.

Senator HARDING. Yes, I understand.

Mr. PAGE. And they designate all those things in her certificate of inspection; that certificate of inspection has a definite period to run. The steamboat inspectors do not see that ship again, in the ordinary course of events; they may have reason to go and check her up; but in the ordinary course of events, they do not see that ship again until her certificate of inspection is about to expire.

Senator HARDING. Then in the beginning the ship must have a certificate from those——

Mr. PAGE (interposing). She must have a certificate before she can be cleared.

Senator HARDING. Would you not think that we were duplicating work to have another set of inspectors in our ship building yards to pass upon ships?

Mr. PAGE. No; I think it is essential that you do have a set of inspectors, because the steamboat inspector, in the nature of things, can not examine a ship as critically as a man who will examine her as she is being built—not when she is built, but as she is being built. It is the duty of the inspector in the yard, just as it is the duty of the inspector for the classification society, to pass upon the material; to see that the steel plates that go into the ship bear Lloyds's mark; that they are of the proper thickness and the proper weight; to see that the riveting is all right; to see that every detail of the ship as she is constructed is proper. Now, no man, after a ship is completed, can go and certify as to those things.

Senator HARDING. Yet it must have his certificate before it can sail?

Senator NELSON. No; not the inspector in the yard.

Senator HARDING. I understand; but it must have the certificate of the steamboat inspector. The point I am getting at is this: Would it not be a practical thing to enlarge our Steamboat-Inspection Service and put this work entirely in the hands of such a force of practical men?

Mr. PAGE. I believe it could be done to better advantage in the same way that it is being done. I think that the way it is being done is more elastic.

Senator NELSON. You see, Senator Harding, the difference between the two is this: That steamboat inspection is for all vessels that fly the American Flag, while this inspection is for the vessels that are constructed under the Emergency Fleet Corporation, whether requisitioned or otherwise. Your inspection is limited to that, while the other covers all of our shipping, and has been in existence for many years under the Department of Commerce.

Senator HARDING. I understand that. The point I am trying to get at is that this long-established Steamboat-Inspection Service must pass upon a vessel before it can go to sea. And I was wondering why it would not be a good practical thing to have that inspection service in charge from the beginning of the ship, if it is the final authority?

Mr. PAGE. Well, I should not say that it it not practical. Of course, my ideas are possibly founded on what prevails in ordinary times. Under ordinary conditions the buyer of a vessel has his own inspector in the yards; he is not going to be satisfied with the report of somebody else; he has his own inspector in the yards. The classification society also have their own inspector on the job. Now, the minute you return to normal conditions those conditions are going to return.

Senator HARDING. No; I am thinking about——

Mr. PAGE (interposing). You are thinking of the extraordinary conditions, of course.

Senator HARDING. That is the very thing I am trying to get.

Mr. PAGE. But then you will simply have to extend your Steamboat-Inspection Service to cover this period of emergency.

Senator HARDING. Exactly so. Since they are the final authority when the ship leaves the docks, I am wondering why they should not be the proper men to have this force on the job; and the force is necessarily made up of practical shipping men, is it not?

Mr. PAGE. Yes; they are all practical men; distinctly practical men.

The CHAIRMAN. There is a full set of rules and regulations issued by the Commissioner of Navigation, and a body of laws on the subject.

Mr. PAGE. I think you are referring to the rules and regulations issued by the Supervising Inspector General.

Senator NELSON. Yes; that is correct.

The CHAIRMAN. I believe it comes under the Bureau of Navigation.

Senator NELSON. Yes; and the country is divided into districts.

Mr. PAGE. Yes.

Senator NELSON. The entire country is divided into districts; it is an old service, that has been in existence for many years.

Senator BANKHEAD. You said a moment ago that you were a member of the board of trustees?

Mr. PAGE. The trustees of the Emergency Fleet Corporation.

Senator BANKHEAD. Emergency Fleet Corporation. Will you state exactly what your duties as trustee are?

Mr. PAGE. My duties as trustee are to attend at meetings when called.

Senator BANKHEAD. Meetings of——

Mr. PAGE. Meetings of the trustees called by the President, or the regular meetings of the trustees, to consider questions of policy. Otherwise I have nothing whatever to do with the internal affairs of the Emergency Fleet Corporation.

Senator NELSON. I should think, Mr. Page, that where there are so many of you on the corporation as trustees, they would distribute some branches of the work to each of you, assign routine work to each of you; would not that keep you busy?

Mr. PAGE. We are pretty busy, anyhow, Senator Nelson, without doing that. No; the work of the Emergency Fleet Corporation is distinctly in the hands of its paid executives. The trustees, as members—who happen to be also members of the Shipping Board—have nothing to do with the conduct of the affairs of the corporation, excepting to pass on questions of policy. We do not undertake——

Senator NELSON (interposing). Yes; but do you not think, in a spirit of economy—you gentlemen get good salaries as members of the Shipping Board—would it not be a good plan to assign some specific share of the work to each of you, instead of sitting up aloft generally and just meeting when you are called together by the President, practically? Would you not feel more happy if you had some particular branch of the work that would keep you busy?

Mr. PAGE. I think it would lead to confusion and interference with the——

Senator NELSON (interposing). You do not mean to say that the members of the Shipping Board could be confused, do you? [Laughter.]

Mr. PAGE. I will have to let you draw your own conclusions about that. I think it would lead to confusion in the operation of the affairs of that corporation.

The CHAIRMAN. The trustees have to do with the selection of the different heads of the different branches of the organization under the Emergency Fleet Corporation? For instance, did you pass on the qualifications of the Director of Transportation, like Mr. Carry?

Mr. PAGE. Well, you have happened to pick out an example that I am not prepared to answer about definitely because I was not here when Mr. Carry was chosen; I do not know whether his name was submitted, but in the ordinary course of affairs, the trustees of the corporation have nothing to say with regard to the employment of any of the executives; that is exclusively in the hands of the President.

Senator BANKHEAD. How many trustees are there?

Mr. PAGE. There are seven of them.

Senator NELSON. And everything in reference to the employment of help is left with him?

Mr. PAGE. It is all in his hands.

Senator NELSON. And the rest of you are simply "dummies"?

Mr. PAGE. We are consulted with regard to policy, but as to the actual operation we know nothing at all.

The CHAIRMAN. I merely used Mr. Carry as an illustration. I will pursue that further: Do you know what his business was before he came to the Emergency Fleet Corporation?

Mr. PAGE. He was engaged in the business of car manufacturing, I believe—I can not recall the name of the concern. I am not certain, but I think it was a car manufacturer.

The CHAIRMAN. Have you finished now, Senator Nelson?

Senator NELSON. No, I wanted Mr. Page to proceed North and give us the conditions of the shipyards on the coast. The last Tillamook.

Mr. PAGE. No, we have passed Tillamook.

The CHAIRMAN. And what was the other?

Mr. PAGE. The Grant-Smith-Porter-Guthrie Co.

Senator NELSON. It was that company with the ornamental name; go on.

Mr. PAGE. Then, when we go up the river, there is the Peninsula Ship Building Co., which is a wooden yard, also an old established yard.

Senator NELSON. That is above the mouth of the Willamette?

Mr. PAGE. Up on the Willamette, between St. Johns and Portland, just on the outskirts of Portland.

Senator NELSON. That is an old yard. How much of a contract have they got?

Mr. PAGE. My recollection is they had four and got four more.

Senator NELSON. Wooden ships?

Mr. PAGE. Yes, wooden ships, of their own type, their own design.

Senator NELSON. Of their own design?

Mr. PAGE. Yes; about the same size as the others, about 3,500 or 4,000 tons dead weight. That is a wooden yard. Then there is another yard, the Standifer Co., which has two yards, one at North Portland, at which they have been building some ships for private account, and another newly established yard at Vancouver, Wash., which is just across the river from North Portland.

Senator NELSON. When you speak about "new yards" I wish, without my asking you, you would let me know in each case whether they are yards that the Government has advanced money to, to help them build?

Mr. PAGE. This is not. The Peninsula Shipbuilding Co.—and that yard has received and I understand is receiving certain assistance for plant extension. The Standifer Yard, a new yard, is receiving nothing from the Government, being built out of their own funds. They have a contract for some 10 vessels, if I am not mistaken.

Senator NELSON. Wooden vessels?

Mr. PAGE. Wooden vessels. Then there is the Coast Shipbuilding Co., at Portland, an excellently organized plant.

Senator NELSON. An old plant?

Mr. PAGE. No, a new plant, built by the owners themselves, without any assistance from the Government, which had a contract for four ships and has been invited to tender and has, I think, received a contract for four more wooden ships, of the Government's design, 3,500-ton ships. That is to the best of my recollection the extent of the wooden yards.

Senator NELSON. Are there any more as you go up from there?

Mr. PAGE. There will be further up, but there are some steel yards on the Columbia River, which we will speak of. There is the Northwest Steel Co., which was building a number of vessels for the Cunard Line, and which have been requisitioned. I do not think it had any contracts for the corporation. It has an offshoot known as the Columbia Shipbuilding Co., also building large steel ships of 8,800 tons.

Then there is another yard there, known as the Albina Engine & Machine Works, which is building vessels of some 3,800 tons for Norwegian account, all of which have been commandeered under the requisition order.

Senator NELSON. Was that an established yard?

Mr. PAGE. That was not an established yard—I will put it this way: It has grown up since the European war; it has no Government business. It was at work on business for private Norwegian account.

Senator NELSON. Those vessels have been commandeered?

Mr. PAGE. They have been commandeered. They are 8-knot small vessels.

Then on Willapa Harbor there is a new yard being built, I think wholly with Government funds—I shall not be sure, but wholly or in part.

Senator NELSON. Willapa Harbor is on the coast?

Mr. PAGE. That is up the coast from Columbia River, about 60 miles up the coast from that point.

Senator NELSON. And that has been financed by the Government?

Mr. PAGE. Yes.

Senator NELSON. There was no yard there before the Government gave the contract?

Mr. PAGE. There was a small yard at Willapa Harbor, but these people did not have it. They were railroad and hydroelectric power people.

Senator NELSON. They were not shipbuilders?

Mr. PAGE. No.

Senator NELSON. They formed a company and then got the Government to advance them the money for the yard?

Mr. PAGE. Yes.

Senator NELSON. How big a contract had they?

Mr. PAGE. Ten hulls is my recollection.

Senator NELSON. Is that the same way that the Government builds a yard and pays the men and furnishes the material?

Mr. PAGE. I can only say I think so; I do not know the details of the contract.

Senator NELSON. Will you look that up and give us the information about that?

Mr. PAGE. Yes sir. I would like to say, in explanation of my ignorance of details of these contracts, that in the ordinary course of business the Shipping Board sees nothing of those contracts.

Senator NELSON. Of course, I do not blame you for that. You have not been long on the board. Most of these contracts or all of them were entered into before you became a member of the board. I am only getting the information, and am not asking these questions in the spirit of criticism, you understand.

Mr. PAGE. I do not like to appear to be so ignorant of the details of these contracts.

Senator NELSON. You look up about this matter. As I understand it the Government did everything for the plant, built it, practically, pays the men, buys the material, and they simply get a bonus of some kind.

Mr. PAGE. I think so.

Senator NELSON. Let us know what that is

Mr. PAGE. Yes.

The next yards are located on Grays Harbor, which is about 60 miles north of Shoal Water Bay, or Willapa Harbor, as it is now known. At Grays Harbor is the plant of the Grays Harbor Motor Ship Co., which has already launched one vessel for the Fleet Corporation.

Senator NELSON. Was that an established yard?

Mr. PAGE. Yes.

Senator NELSON. Before the Government made a contract with it?

Mr. PAGE. Yes. They are receiving no Government assistance. They have extended their plant.

Senator NELSON. How many ships have they agreed to build?

Mr. PAGE. They had a contract for four, and recently they received a contract for four—I think two subsequent contracts for four each.

Senator NELSON. They are all wooden vessels.

Mr. PAGE. Wooden vessels.

Senator NELSON. They have one ship afloat, you say?

Mr. PAGE. They have already launched one for the Fleet Corporation.

Senator NELSON. That is some consolation to find one vessel has been launched by these companies.

Mr. PAGE. These people have done very well; they have a good organization and can do the work.

Senator NELSON. And it is in the midst of a good lumber country?

Mr. PAGE. It is right in the timber country.

Senator NELSON. Go ahead now.

Mr. PAGE. They have a good labor market and are far enough away not to interfere with other labor markets.

There is also in Grays Harbor another yard, which is an old yard. I think it is being extended with Government funds, operated by this same concern—Grant-Smith-Porter-Guthrie, of whom I spoke, on the Columbia River.

Senator NELSON. Kindly give us the same information about that.

Mr. PAGE. With pleasure. That finishes the yards at Grays Harbor.

Now, there is one at Olympia, the yard which was spoken of here on Saturday or Friday, the Sloan Shipbuilding Co., with a contract for 16 hulls.

Senator NELSON. The Sloan Co. is at Olympia?

Mr. PAGE. At Olympia.

Senator NELSON. I got it into my head that it was over at Seattle.

Mr. PAGE. No; at Olympia.

And then at Tacoma there is a yard of the Wright Shipbuilding Co., which was building on private account.

Senator NELSON. Not for the Government?

Mr. PAGE. No. The Seaborn Shipbuilding Co.——

Senator JONES. The Wright Shipbuilding Co. has a contract now?

Mr. PAGE. It may have now, Senator Jones, but I am speaking of the time when I visited those yards—I am visualizing the condition in October last.

Senator JONES. I understand they have two Government ships now.

Mr. PAGE. At the time of which I speak, in October, they were building for private account.

Senator NELSON. And I suppose that has been commandeered and taken?

Mr. PAGE. No, because they were wooden motor vessels below the size the Government concerned itself with. I think they were auxiliary motor schooners. Then, let us see—there is the Wright yard and the Seaborn yards at Tacoma. The Seaborn Co. was building for Government account; they had, I think, four hulls.

Senator NELSON. Were they in existence before the contract was let?

Mr. PAGE. Yes; and they are receiving no Government assistance in the plant extension.

Senator NELSON. A wooden-ship yard?

Mr. PAGE. A wooden-ship yard. Then there is the Tacoma Shipbuilding Co., which had a contract for either four or eight ships.

Senator NELSON. Wooden?

Mr. PAGE. Wooden vessels; a new yard not receiving any Government assistance, but laid out on a very extensive scale, capable of being converted into a steel yard; and then adjoining Tacoma is the yard of the Todd Shipbuilding Co., an allied corporation of the Seattle Construction Co., which I did not see, which was in process of being built at the owner's own expense.

Senator NELSON. Have they a contract?

Mr. PAGE. I think so, but I can not say. At Seattle there is the yard of Skinner & Eddy, from which one hull has already been launched, and which has been delivered to the corporation by this time.

Senator NELSON. That was an existing yard before the contract?

Mr. PAGE. They have been in existence for about two years, building for private account, and they had a number of vessels which were requisitioned, and they have also contracts with the corporation.

Senator JONES. They have launched more than one vessel?

Mr. PAGE. I think they have launched the second one.

Senator JONES. On the 22d of December a second one?

Mr. PAGE. For corporation account. They have launched ships in 64 days.

Senator JONES. They turn out one about every 30 days.

Mr. PAGE. Eight thousand eight hundred tons.

The CHAIRMAN. How many ways have they, do you know?

Mr. PAGE. My recollection is three; I could look it up for you.

Senator JONES. No; they have more than that, six or eight—I forget now.

Mr. PAGE. I will refer to some notes I have here [referring to papers.] The yard has five ways, all occupied when I was there.

The CHAIRMAN. How many contracts have they, do you say?

Mr. PAGE. My recollection is they had a contract for four hulls. There was some difficulty with that yard over the question of labor.

Senator NELSON. Are there many more yards there?

Mr. PAGE. Yes.

Senator NELSON. Give some of them.

Mr. PAGE. At Seattle there is the Skinner & Eddy plant, and then alongside of them is the Seattle Construction & Dry Dock Co., which is an old established plant with about four ways.

Senator NELSON. They have contracts?

Mr. PAGE. They have contracts which will not be reached for quite a while, however, because they are pretty well filled up with private contracts. You see, it takes some time to get these private contracts out of the way before they can reach the Government work.

Senator NELSON. They will be commandeered?

Mr. PAGE. Oh, yes, they will be commandeered. It is just tweedledee and tweedledum.

Senator NELSON. Just the same as though they were being built for the Government?

Mr. PAGE. Yes. Then there is the Ames Shipbuilding Co., which has a capacity of about four ways for big steel ships, and the J. F. Duthie Co., which has got about the same capacity, I should say, four ships; and then there was a new one, Patterson & McDonald, which I think has received a contract. That was a new yard built with the owners' own money, which has received a contract for four or six steel hulls; and had some wooden ships, I am not sure whether under contract with the Government or for private account. There is another wooden yard at Seattle, called Nilson & Kelez, and there is a little wooden yard at Tacoma which I forgot to mention, Barbare Bros., who had a contract for one hull, and have since contracted for another one, a competent concern.

Senator NELSON. Are all these last named yards wooden hulls?

Mr. PAGE. Wooden hulls.

Senator NELSON. Existing and in business before receiving contracts from the Government?

Mr. PAGE. Not financed by the Government, and were existing prior to this emergency and were not, to the best of my recollection, helped. To the best of my recollection, I have covered them all.

Senator NELSON. There is none at Anacortes?

Mr. PAGE. There is a yard over at Anacortes or Bellingham, I think it is, which is building for private account, not for the Government.

Senator NELSON. None at Port Angeles?

Mr. PAGE. No, none that I know of.

The CHAIRMAN. Mr. Page, as I understand, there are two yards on the Pacific coast built and controlled by the Government?

Mr. PAGE. There is the Grant-Smith-Porter-Guthrie yard on the Columbia River, being built with Government funds; there is the Sanderson——

The CHAIRMAN. At what point on the Columbia River?

Mr. PAGE. St. Johns. There is the Sanderson & Porter yard on Willapa Harbor. I have referred to it, I think, as Shoal Water Bay, but Willapa Harbor is the name nowadays, also being built with Government funds, and there is the Peninsula Shipbuilding Co., at Portland, in which the Government is interested in plant extension.

Senator NELSON. But the other two were entirely new yards?

Mr. PAGE. Yes, new yards.

The CHAIRMAN. And the other one?

Mr. PAGE. Let us see, what is the last one you have now?

The CHAIRMAN. Sanderson-Porter.

Mr. PAGE. Peninsula?

The CHAIRMAN. Peninsula—I have that; and then there is the Sloan Co.

Mr. PAGE. The Sloan yard was not being built with Government funds; that is, he is not acting as the agent of the Government in building that yard.

The CHAIRMAN. The Government has taken it over, have they not?

Mr. PAGE. No, I do not think they have taken it over; I think they have made certain arrangements with the backers of that concern to furnish bonds and to retire this man from the active management.

Senator NELSON. They were giving him $10,000 salary?

Mr. PAGE. He had supervision of the yard.

The CHAIRMAN. Where is it?

Mr. PAGE. An Olympia yard. There is a sort of a protectorate exercised over it.

The CHAIRMAN. With reference to the plant of the International at Hog Island, do you know where all the material must come from to build that plant—the lumber for the houses and the ships?

Mr. PAGE. I do not.

The CHAIRMAN. You are not acquainted with that?

Mr. PAGE. I am not acquainted with that.

The CHAIRMAN. Mr. Page, there have been some suggestions made to the effect that the equipment and fitting out of the wooden ships is too elaborate; have you inquired into that at all?

Mr. PAGE. I have not, Senator; no.

The CHAIRMAN. Would it not be well to take that matter up and determine whether that is the case or not?

Mr. PAGE. Yes. I have never heard the suggestion made before.

The CHAIRMAN. And what would you also think of this suggestion: Whether it would be a good idea to select two experienced shipbuilders, say, from the Pacific and from the Atlantic coasts, and one from the Great Lakes, to confer with Mr. Hayworth, with the idea of simplifying the outfitting and equipping of the wooden ships, so as not to sacrifice or lessen their efficiency in any way?

Mr. PAGE. To reduce their cost?

The CHAIRMAN. To reduce their cost and hasten their completion—that suggestion, it seems to me, is worth considering.

Mr. PAGE. I think it would be a very good thing. As to whether it would be necessary to have two men from each coast, I am not sure of that, but that kind of assistance, I should think, would be welcome.

The CHAIRMAN. These experienced shipbuilders would likely know whether it is necessary to equip a ship right up to the latest modern ideas in this emergency or whether you can get just as good a service with more simple and less elaborate equipment. That might result in saving as to cost, and at the same time hasten the completion of the ships.

Mr. PAGE. I would be surprised to learn that the equipment is at all extravagant on those ships, from the general plans.

The CHAIRMAN. I have no knowledge of it, but that suggestion has been made, and it occurs to me it is worth looking into.

Senator NELSON. They are all to be steam vessels, none of them sailing vessels?

Mr. PAGE. All steamers, full power.

Senator NELSON. You are familiar with the conditions on the coast. Has the building program of these wooden ships, for instance, been retarded by the lack of getting a supply of lumber promptly?

Mr. PAGE. It has.

Senator NELSON. An what has that arisen from—from strikes in the lumber camps?

Mr. PAGE. Trouble in the camps.

Senator NELSON. Among the men getting out the timber?

Mr. PAGE. Trouble, I believe, fostered by the I. W. W., there was trouble over the 8-hour day, but all fostered by the I. W. W.'s very largely.

Senator NELSON. They have steadied up?

Mr. PAGE. I think so.

Senator NELSON. Are you able to go into details and tell us how much it has been delayed—how many days?

Mr. PAGE. No, I am not, Senator, intimately acquainted with that.

Senator NELSON. Has there been any delay in consequence of the lack of getting material in the building of steel ships?

Mr. PAGE. Yes, there has.

Senator NELSON. Have you been able to get that promptly?

Mr. PAGE. There has been some delay; certain yards, for instance, have received an ample supply of shapes and no plates. I do not know whether you appreciate the distinction. In the building of a steel ship, the shape corresponds to the scantling that goes into your house, and the plate is like the plaster on the wall, the covering. For instance, if you have the scantling and not the covering you can not complete your house. That has been mostly the condition of the yards.

Senator NELSON. Let me ask you this, Mr. Page: Is there on the Pacific Coast, taking the line of coast we have been over, any rolling mills or steel mills where they make these plates, or do those all come from the East?

Mr. PAGE. Yes.

Senator NELSON. Most of the material for the steel ships has to be shipped from the East?

Mr. PAGE. Most of it. The great bulk of it must come from the East, and there are some delays due to congestion of traffic.

Senator NELSON. And that has been hampered not only by not getting it from the mills, but also by transportation facilities, has it not?

Mr. PAGE. My best judgment would be that it was due to transportation difficulties rather than the difficulty of getting it at the mill, because I heard that builders who were embarrassed in that way were advised that their shipments had left the mill but they had not received them.

Senator NELSON. I think you are right about that.

Senator JOHNSON. Mr. Page, Senator McCumber wishes to inquire whether you could use the lumber immediately it was cut; that is whether it had to be seasoned before it could be used in the construction of wooden ships?

Mr. PAGE. On the Northwest Coast, for many years they have been building wooden ships with timber that has come right out of the log. At several yards I know of they have their own mills, and they pull the log right out of the water, cut the timbers out and in the course of two or three days they go into the ships.

Senator NELSON. Excuse me, Senator Johnson?

Senator JOHNSON. Go ahead.

Senator NELSON. Do they not have some system by which they dry the lumber and cure it? I think I have seen something about that method, by which they put it through a curing process in two or three days by heat.

Mr. PAGE. I do not know whether there is. I would like to have it understood that I do not speak of exact knowledge as a shipbuilder. It is only general business observation upon which I base my remarks.

Senator NELSON. I noticed something of that kind in the newspapers.

Mr. PAGE. I have seen that recently. I might add that that was one of the reasons why some people located in the southern part of California to build ships notwithstanding there was no timber there.

The timber was sent down to Southern California—and in the price of the ships I believe the Government is allowing the freight, figuring that because of the climatic conditions it will get a ship in which the timber is so much better cured that it is going to be worth while.

Senator JONES. Do they lay the timber out while drying it?

Mr. PAGE. Yes.

Senator JONES. How long do they calculate on having it exposed to the California climate?

Mr. PAGE. I can not say. Several weeks, from what I was told. This is at Los Angeles.

Senator HARDING. Is there any kiln process of curing?

Mr. PAGE. I do not know. I have seen it in the papers. Of course, there is a kiln process of drying lumber. There is a great deal of lumber that is put on the market as kiln dried lumber.

Senator BANKHEAD. That only applies to boards?

Mr. PAGE. That only applies to boards and small sizes.

Senator BANKHEAD. You could not dry in that way one of these large pieces 28 by 30?

Mr. PAGE. Not in a kiln; no. But some of it is air-dried.

Senator JOHNSON. Very few days in the California climate will cure anything. [Laughter.]

Senator JONES. It will veneer it, anyway.

Mr. PAGE. I believe that is true.

Senator BANKHEAD. Mr. Page, when you launch one of these ships, what time is required to fit it up with machinery so it will be ready for the sea?

Mr. PAGE. I would say, if there is no delay in receiving the engines and boilers, if things move along in normal fashion, that from 30 to 60 days is the normal time for fitting up.

Senator BANKHEAD. What is your experience as to the delay? Are you able to get materials promptly for fitting out these ships with engines, boilers, etc.?

Mr. PAGE. I could not say as to that. I have not had any experience upon which to base an answer.

Senator BANKHEAD. It is pretty important to know.

Mr. PAGE. I think it is largely a matter of organization. The Skinner & Eddy people turn out a ship in 30 days, I imagine, after she was launched. That first vessel was launched early in December, was it not, Senator Jones?

Senator JONES. No; November some time.

Mr. PAGE. Late in November?

Senator JONES. Yes.

Mr. PAGE. And she was to be ready for delivery late in December; that is about 30 days.

Senator BANKHEAD. That is about 30 days?

Mr. PAGE. She was to be delivered on the 29th. I do not know whether delivery was made on time or not.

Senator JONES. I understand she was pretty near ready to sail on the 29th.

Senator BANKHEAD. These mills in the East are very much engaged, and I did not know but what you might have experienced some pretty serious difficulty in getting machinery.

Mr. PAGE. Those yards that are dependent upon the East for their engines—turbine engines or water-tube boilers; yes. Some of the other yards, like Skinner & Eddy, are nothing more or less than assembling yards. The Union Iron Works, at San Francisco, or the Seattle Construction Co., at Seattle, are manufacturing plants; they manufacture boilers, winches, steering gears, and their engines.

Senator BANKHEAD. They have to get the raw material from the East?

Mr. PAGE. Yes; raw material. But the material ought to be way ahead of the work.

Senator NELSON. The other yards have to come East?

Mr. PAGE. To get turbines, and boilers at Seattle or Portland.

Senator HARDING. Would it expedite matters for the Emergency Corporation if you built hulls on the west coast and towed them through the Panama Canal to the east coast for fitting out?

Mr. PAGE. I do not think it is possible to get vessels towed around. Tow boats are impossible to get, and towing a hull of that kind is a serious matter; it is a serious risk.

Senator HARDING. You mean it has not been ballasted?

Mr. PAGE. Yes; towing a big vessel is always a rather serious risk. I am speaking more from the standpoint of the underwriters, who charge a good figure because it involves the risk of losing the vessel. Of course, you can load her so that she will get down in the water all right.

Senator HARDING. We built a dry dock and towed it to the Philippines?

Mr. PAGE. Yes, we did; but it was a great big job, and there was a lot of anxiety. I do not mean to be understood as saying vessels are not commonly towed, but I do not think it is the wise thing to do.

Senator HARDING. I was not criticizing, but just trying to find out if it was practicable.

Mr. PAGE. I did not understand that you were criticizing, but I wanted to make myself clear.

Senator JONES. Mr. Page, I saw some reference some time ago in a paper to a proposal to establish a steel plant out on the Pacific coast, in the Northwest. Do you know anything about that, or was that contemplated by the board?

Mr. PAGE. Not for the board; not within my knowledge; I have no knowledge of it.

Senator JONES. You do not know anything about it?

Mr. PAGE. No, sir.

Senator HARDING. Have we not commandeered a lot of tugs and sent them abroad?

Mr. PAGE. Yes.

Senator HARDING. What do we do with them abroad?

Mr. PAGE. The French use them. I think it would be probably preferable if I stated the use they are put to in the executive session.

Senator HARDING. Very well.

Senator NELSON. How many yards are above the rapids on the Columbia?

Mr. PAGE. I did not get above the rapids.

Senator NELSON. Are there any yards above the rapids?

Mr. PAGE. Not to my knowledge; no.

Senator NELSON. There is a yard up in New Hampshire above a big railroad bridge. [Laughter.]

Mr. PAGE. Well, railroad bridges can be cured and rapids are pretty hard to get around.

The CHAIRMAN. I do not know but what this might be answered in executive session, but my inquiry is whether you know of any yards that are financed or where the chief interest has been in people who are supposed to be pro-German in their sentiments?

Mr. PAGE. No. I can answer that now, because I do not know of any such conditions.

Senator JONES. If there is anything of that kind it ought not to be made executive.

Senator NELSON. Have you read that article in the Post? Do you know anything about that matter?

Mr. PAGE. I do not know anything about it; no, Senator. Mr. Chairman, I have been reading over the testimony, and there is a point I would like to have an opportunity to clear up, if I might, with regard to these designs. I think there has been possibly a feeling that the shipbuilding program has been slowed up because a uniform design was not adopted. I can not see that anyone has cleared that up. I would like to say this: The adoption of a standard design is all very well for new yards, but for the old shipyards that have been working for years, which have evolved their own designs which are in step with their own machinery and their own organization, to impose a standard design of the Government on those yards would distinctly delay instead of faciltiating delivery.

The CHAIRMAN. I think you are right about that.

Mr. PAGE. It was not cleared up.

The CHAIRMAN. But the question is, Has there been any delay after builders have gone ahead, where they have been obliged to submit their plans and designs to the officers of the Emergency Fleet Corporation, who have examined them all, and approved or disapproved, or made changes?

Mr. PAGE. They have necessarily examined them and approved or disapproved, and made such changes as were necessary, but I think on designs that were put out by the builders themselves there has been a minimum of delay due to any changes. They are in such condition, based on shipyard practice and experience, that there was no occasion to make any changes. I have not heard of any changes there.

Senator BANKHEAD. The ships being built in the new yards are all standardized, are they not?

Mr. PAGE. Yes.

Senator BANKHEAD. If you build 9,000 and 10,000 ton ships, they all exactly the same?

Mr. PAGE. That is generally so. Particularly these fabricated ships are built on certain standards. There is a variation in plans, I believe, between certain yards, but if you have 150 ships coming out of the submarine boat yards they are all the same.

Senator NELSON. Are any of the wooden vessels standardized?

Mr. PAGE. Yes, all of them. The Ferris and the Hough type are standardized. If a yard had a contract for 10 hulls, either 10 Ferris hulls or 10 Hough hulls, the whole plant was put into step with that design.

Senator NELSON. Let me see if I understand you. You speak of "standardizing." Are your standards not only as to the form and method of construction but also as to the tonnage.

Mr. PAGE. Yes.

Senator NELSON. They are of the same tonnage?

Mr. PAGE. Oh, yes; they would be of the same tonnage.

Senator BANKHEAD. And machinery?

Mr. PAGE. Not necessarily the same machinery, no—in the same yard, yes. Well, to illustrate, you might have an 8,800 ton ship coming out of a yard in San Francisco which is equipped with reciprocating engines, and you would have one coming out of a yard in Seattle which is exactly the same hull and the same equipment that has a turbine engine—two different types of engines.

Senator BANKHEAD. I understand that.

The CHAIRMAN. In the case of these established yards bidding on ships, you say you let them proceed in their own way. Do they submit a plan or design with their bid, or do they just say "We will bid so much for a 3,500-ton ship," and proceed to build it in their own way until some time later when you see fit to examine it and pass on it?

Mr. PAGE. I am not personally familiar with the practice that has been actually followed, but speaking from the general practice—and there is no reason why the general practice should not have been followed in this case—a ship owner will contract with a builder to deliver him a ship of 10,000 tons dead weight, we will say, at so much a ton on the ship builder's own designs. The ship builder submits those designs, which the buyer approves, and then goes ahead.

The CHAIRMAN. I understand that.

Mr. PAGE. That would be the case here.

The CHAIRMAN. You said there were instances wherein they did furnish any design at all; you just let the builder proceed in his own right.

Mr. PAGE. The builder would submit his designs first, because the builder was already building ships of that type. He had an established type in his yard.

The CHAIRMAN. You would let him go ahead until you saw fit to pass on the design that he submitted, one way or the other?

Mr. PAGE. I would say that before letting him go ahead they would approve his design.

Senator JONES. And then you would have an inspector in charge to see that he complied with it?

Mr. PAGE. To see that he complied with the specifications.

Senator NELSON. Your inspectors that you have in the yards, Mr. Page, are they like the inspectors that a man has when he has a big building under construction?

Mr. PAGE. Exactly.

Senator JONES. He looks after the work as it progresses and sees that the right materials are used and the right methods are carried out?

Mr. PAGE. He sees that the specifications are carried out.

Senator NELSON. In detail?

Mr. PAGE. In detail; he examines the thing.

Senator NELSON. That is what your inspectors are doing?

Mr. PAGE. That is what the inspectors are for.

Senator JONES. As I understand, you do not have inspectors in each yard?

Mr. PAGE. There are inspectors in each yard. There might be a case of a yard with one small vessel that would not have an inspector in it; we might not have an inspector constantly there.

Senator JONES. I thought it very strange, that somebody testified here, representing the board, that they had not inspectors in every yard, but somebody out in a district.

Mr. PAGE. The district is in charge of a district officer, and the district officer has in each yard his inspectors. It is his business to have an inspector, in some cases more than one inspector, in a yard.

Senator JONES. I understand you say, then, that you have inspectors representing the Fleet Corporation in every yard where ships are building?

Mr. PAGE. That is my understanding, yes; that there are inspectors in every yard where there is any work going on.

Senator JONES. They report to the district officer?

Mr. PAGE. They report to the district officer.

Senator NELSON. And he reports here?

Mr. PAGE. To the management of the corporation.

Senator NELSON. That is the way I understood it the other day.

The CHAIRMAN. The committee will now proceed to the consideration of executive business.

(Thereupon, at 3.35 o'clock, the committee proceeded to executive business, and at 5.15 o'clock p. m. adjourned to meet at 2 o'clock p. m., on Wednesday, January 2, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

WEDNESDAY, JANUARY 2, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m. in the committee room, Capitol, Senator Duncan U. Fletcher, presiding.

Present: Senators Fletcher (chairman), Bankhead, Nelson, Jones, Sherman, Harding, and Johnson.

The CHAIRMAN. We will now resume with Admiral Bowles, who was interrupted in making his statement by an executive session of the committee.

Do you want to take up any particular subject, Admiral Bowles?

STATEMENT OF ADMIRAL F. T. BOWLES, MANAGER DIVISION OF STEEL-SHIP CONSTRUCTION, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—Resumed.

Admiral BOWLES. Senator Jones asked me to submit the salary list of the American International Shipbuilding Corporation, Mr. Chairman, and I have here the complete salary list of that corporation covering salaries paid by the Emergency Fleet Corporation, which I submit for the record.

(The salary list of the Fleet Corporation referred to will be found printed in full on page 245 of these hearings.)

I also submit a letter from the president of the American International Shipbuilding Corporation giving the names of those who give their time to the work at Hog Island who are not paid under the agency contract. Those names are given, and the proportion of time that they spend there, and the positions that they occupy in the other branches of the American International Co. are also shown.

Senator JONES. That is the information that I asked for.

(The letter referred to is here printed in full, as follows:)

AMERICAN INTERNATIONAL SHIPBUILDING CORPORATION,
Washington, D. C., January 2, 1918.

Admiral F. T. BOWLES,
United States Shipping Board,
Emergency Fleet Corporation,
Washington, D. C.

DEAR SIR: Answering your request for a statement giving individuals who are devoting their time wholly or in part to the construction of shipyard and ships at Hog Island, no part of whose salaries is paid by the Emergency Fleet Corporation.

I give below a list showing the individuals in question and the approximate amount of time they are devoting to the project.

Dwight P. Robinson, 100 per cent, president American International Shipbuilding Corporation and partner Stone & Webster.

George O. Muhlfeld, 100 per cent, vice president American International Shipbuilding Corporation, construction manager, division of construction and engineering of Stone & Webster.

H. D. H. Connick, 10 per cent, vice president American International Shipbuilding Corporation, and vice president American International Corporation.

Howard L. Rogers, 20 per cent, vice president American International Shipbuilding Corporation, and division manager, division of construction and engineering, of Stone & Webster.

George C. England, 50 per cent, treasurer American International Shipbuilding Corporation, and treasurer, division of construction and engineering of Stone & Webster.

The aggregate compensation of these men is at least $150,000 per year.

Messrs. Robinson, Muhlfeld, and Connick comprise the executive committee of the American International Shipbuilding Corporation, and as such, direct its operations.

Messrs. Rogers and England act in advisory capacities in connection with organization, general accounting, and financial matters.

Very truly, yours,

DWIGHT P. ROBINSON, *President.*

Senator NELSON. Does that give the detailed wages paid the men?

Admiral BOWLES. The first list does. This second list (indicating) does not give the salaries of the gentlemen who are giving their time there, but it says the aggregate compensation of these men is at least $150,000.

Senator JONES. But that is paid by the corporation?

Admiral BOWLES. Yes, sir; not paid by our Fleet Corporation.

Senator JONES. I understand.

Senator NELSON. But does it give information of what the different classes of employees get by the day?

Admiral BOWLES. This list that I am submitting, Senator Nelson, gives, in the first place, a summary showing the grouping of the men into engineering, general manager's department, office manager, works manager, accounting, employment, purchasing, commissary and fabricating departments. It gives the number of employees in each one of these departments, the total being 267; and it gives the total salaries per month in each department, the total per month for the whole being $96,649.28.

Now, the list in detail shows the name of the person, his position, his monthly rate of pay, and his previous record in brief.

Senator NELSON. If you will allow me to interrupt your statement at this point, Mr. Page's testimony at the last session of the committee disclosed the fact that there were two wooden shipyards on the Pacific coast operating under a similar system, where the Government had advanced everything.

Admiral BOWLES. No; Mr. Page must have been mistaken. There are no such contracts on the Pacific coast.

Senator NELSON. Well, not identical with this, but contracts in which the Government had advanced everything toward building the yard.

Admiral BOWLES. Oh, yes; but not agency contracts, where we are responsible for——

Senator NELSON (interposing). And where the Government pays for the material and pays the men.

Admiral BOWLES. No; there are no such contracts on the Pacific coast.

Senator NELSON. Well, there are two contracts where the Government built the yards—furnished the money—for wooden ships?

Admiral BOWLES. There is one contract on the Pacific coast where there is a condition of entire control by us, and that is in the Sloan Shipyards Corporation; but that was not the original condition; it resulted from some——

Senator NELSON (interposing). No; these were two other cases besides that.

Senator JONES. If you will permit me, Senator Nelson, I think he referred to the Grant-Smith-Porter-Guthrie Co., down near Portland, Oreg.; that was one of them.

Admiral BOWLES. Yes.

Senator JONES. And a branch, called either the Sanderson-Porter or the Grant-Sanderson yard, up on Willapa Harbor.

Senator NELSON. Yes; those are the two.

Admiral BOWLES. Those are the two contracts, as we have explained before, where the Government advanced the money for the construction of the shipyards, and therefore limits and controls the amount to be spent for overhead expenses and salaries. And there are, of course, a number of such contracts; but that is a matter of control, not of direct payment.

Senator NELSON. Well, those are the two cases that I referred to which Mr. Page had mentioned.

Admiral BOWLES. Well, there are a number of contracts similar to that on the Atlantic coast.

The CHAIRMAN. Mr. Page also mentioned the Peninsular Shipbuilding Co., of Portland, Oreg.—a plant-extension case, I think—as one of the plants that was being financed by the Government; and then he mentioned the Sloan yard, to which you have just referred. I believe he mentioned four altogether.

Admiral BOWLES. In the analysis of contracts which I gave the committee in connection with my last testimony there is shown the exact number of contracts similar to the Sanderson-Porter-Guthrie and the Peninsular Shipbuilding Co. contracts.

But those are entirely different from these agency contracts. The reason that in those cases we have to act upon the salaries of the officials is that the cost of the vessel which is mentioned in the contract includes, of course, the overhead of the shipyard. And if we did not exercise that control, it would be possible for a shipyard to have functionaries like corporate officers, who were doing nothing toward building ships and yet drawing large salaries. So that in every one of those contracts we have called upon the contractor to give us a list of all salaried officers whose salaries were chargeable as a part of the overhead expenses; and we have reduced those to a suitable charge and only permitted people to draw salaries who were giving their time in an efficient manner to the construction of the ships.

Senator NELSON. Well, do you pay them?

Admiral BOWLES. We do not pay them directly; they are paid by the companies themselves out of payments——

Senator NELSON (interposing). Then after the company pays them you reimburse the company?

Admiral BOWLES. Yes.

Senator NELSON. As you go along?

Admiral BOWLES. Well, not—we reimburse them only through the payments provided for in the contract.

Senator NELSON. The installments provided for?

Admiral BOWLES. The installments provided for the purpose. There are one or two cases where companies have got into difficulties, where we have had to put in what we call a controlled account, that is, pay their bills as they come along.

Senator NELSON. What companies are those?

Admiral BOWLES. I handed in a list of the controlled accounts; but I will examine this statement [indicating] and give you the names. [After a pause.] The companies which have at the present time what we call an impressed account are the Hanlon Shipbuilding Co., of Oakland, Cal.; the Hillyer-Sperring-Dunn Co., of Jacksonville, Fla.; the J. M. Murdock Co., of Jacksonville; the Standard Shipbuilding Corporation, of New York; the L. H. Shattuck Co., of New Hampshire.

Senator NELSON. That is the company that is up on the Piscataqua, is it not?

Admiral BOWLES. Yes. Then the Chester Shipbuilding Co., of Chester, Pa.; the Pennsylvania Shipbuilding Co., of Philadelphia; the New Jersey Shipbuilding Co., of Philadelphia. Those, in addition to the fabricating companies—that is, the American International, the Merchants, and the Submarine Boat—have what we call an impressed account.

Senator NELSON. What have you to do with these companies that you have just mentioned; what amount of education have you had to undertake since you made the original contract?

Admiral BOWLES. Well, in some of these companies they have found themselves unable to finance the construction of the shipyard as they had agreed; they were unable to borrow money or to raise money for the purpose, and they had to expend some of the money intended under the contract for the construction of the ships for that purpose; and in those cases, in order to make sure that they did not expend this money improperly, we have placed an account at the disposal of the district officer and told him that, for the present, he could pay all their bills that were applicable to the construction of ships, and a certain amount for the purchase of machinery and tools and things for their shipyard. That, of course, superseded all the methods of payment provided under the contract.

There is another class of impressed accounts, with people building requisitioned vessels. Several shipyards found that their deliveries of material were so much greater than they had expected—this is on the Pacific coast, owing to the strike there—that they were entirely unable to pay for this material coming for the ships that had not been begun out of the payments which they had earned on the ships that were progressing, and therefore they have had to come to us to borrow money. In some cases we have made them a direct advance, to be taken out of their subsequent payments. In some cases we have taken a bill of sale of the materials that they had on hand, and in other cases we have made what we call an impressed account; that is, we have placed $500,000 in a special bank subject to their check, but no check was good until the bank had received an O. K. from our district officer.

Those various devices have been necessary to keep the ships moving.

Senator NELSON. Were not most of those cases of this kind: Where the men that started in had no yards and had not sufficient capital, and they got these contracts and then were stranded and you had to help them out? Are those not the facts of the case?

Admiral BOWLES. Well, that was the case with many of them; but many of the well-established yards have found themselves unable to finance their contracts with their present payments.

Senator NELSON. Yes.

Admiral BOWLES. The banks absolutely refused to lend them any money, and the usual sources of supply of money when they had a tight period were gone.

Senator NELSON. How do you account for the fact that the banks would refuse to loan money to well-established shipyards?

Admiral BOWLES. I do not know, except that it seems to be general, and it is not confined to any part of the country; it is universal.

Senator NELSON. Are there no banking institutuions in this country which are loaning money on ships?

Admiral BOWLES. Well, it has been a universal complaint to us from all parts of the country, that they could not get money on Government contracts, and so in order to keep our work going we have been absolutely obliged to do this financing. In many cases we have taken mortgages on the plants—in a great many cases.

The CHAIRMAN. In the case of the Hillyer-Sperring-Dunn Co. you took over the plant, did you not?

Admiral BOWLES. The case of the Hillyer-Sperring-Dunn was a very unusual one. That arose from a suspicion of disloyalty on the part of some one connected with the company. That was before I joined the Fleet Corporation; and as the result of that the counsel of the Fleet Corporation recommended that the plant be commandeered. And when I took charge of the situation everybody was under the impression that the plant had been commandeered. But when we came to investigate it we found that Admiral Capps had very prudently, at the last moment, inserted the word "use" in his commandeering order, and that thereby he had only commandeered the use of the yard; so we were able to complete the negotiations with the Hillyer-Sperring-Dunn Co. by paying them a suitable rental for the yard for the time that was necessary to complete our two ships, and also to complete their other work; and that work is now going on without any difficulty.

Senator NELSON. In that case, then, the Government is now carrying on the work?

Admiral BOWLES. The Government is now carrying on all the work.

Senator NELSON. So that you have one case where the Government is building ships in a yard that you are renting?

Admiral BOWLES. In a yard that we are renting. It is a very unfortunate business.

Senator NELSON. Is that the only case of the kind?

Admiral BOWLES. That is the only one; it is a very unfortunate thing, and a very poor business move for the Government to make. We shall lose money by it.

Senator NELSON. In what way?

Admiral BOWLES. Well, we are having to pay a very——

Senator NELSON (interposing). High rental?

Admiral BOWLES. A very high rental. But we are justified in paying it, because the commandeering of the yard ruined the credit of the people that were running that yard, and it stopped their plant from development; the yard stands still in the hands of the Government for two years.

Senator NELSON. And you are only building two ships?

Admiral BOWLES. We are building only two ships in it.

Senator NELSON. Are they wooden or steel ships?

Admiral BOWLES. Wooden ships; wooden hulls; we had contracts for four wooden hulls.

Senator NELSON. Four wooden hulls?

Admiral BOWLES. It was a very unfortunate thing.

Senator NELSON. It will not take two years to build those two wooden ships, will it?

Admiral BOWLES. No; we ought to have them finished before that.

Senator JOHNSON. Well, is it only by virtue of the rental that you pay that it is an unfortunate thing for the Government?

Admiral BOWLES. We have been in a great many complications; there has been a question of the supply of power between the city of Jacksonville and East Jacksonville, and ——

Senator JOHNSON. (interposing). Well, that might arise under any circumstances. But you are building ships there and building them in appropriate fashion, are you not?

Admiral BOWLES. Yes, sir.

Senator JOHNSON. And doing a good job in the actual construction of the ships themselves?

Admiral BOWLES. I think there will be no question about that.

Senator JOHNSON. So that in the construction of ships by the Government in shipyards you could, if it were necessary, perform the requisite work, could you not?

Admiral BOWLES. Oh, yes; there is no question of that. But I think these particular ships will cost us more than they ought to cost.

The CHAIRMAN. I saw a man yesterday who had just come from that place and was thoroughly familiar with the work there; and he said that the work was getting on splendidly.

Senator NELSON. Have they had any difficulty in getting their lumber there?

Admiral BOWLES. Yes; they had had trouble, as everybody else has had.

Senator NELSON. Yes; have they had any labor troubles?

Admiral BOWLES. They have had no labor troubles.

The CHAIRMAN. They told me that they had all of the lumber they wanted now, and the necessary labor, and that everything was going forward expeditiously.

Admiral Bowles has submitted rough drafts, as he calls them, of three proposed bills which he would like to have considered by the committee. These are, respectively, a bill to provide housing facilities for workers in shipyards; a bill granting the power to the President or his representative to take over local transportation systems for the use of employees in shipyards; and a bill to create a military zone around shipyards where vessels are under construction for the United States.

These drafts of proposed bills will be printed in the record of the hearings at this point.

(The proposed bills referred to are here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 1, 1917.

Hon. DUNCAN U. FLETCHER,
Chairman Senate Commerce Committee, Washington, D. C.

MY DEAR SENATOR: In accordance with the request made by your committee, I am handing you herewith rough drafts of bills asked for in my testimony to aid us in securing full output of shipyards, namely, (1) a housing bill; (2) right to requisition local transportation for shipyard employees; (3) an act to create military zones around shipyards where vessels are under construction for the United States.

Very respectfully, yours,

F. T. BOWLES,
Manager Division of Steel Ship Construction.

HOUSING BILL.

AN ACT Making appropriations to supply urgent deficiencies in appropriations for the fiscal year ending June 30, 1918, and prior fiscal years, on account of war expenses, to provide for proper housing of employees of shipyards and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled. That the United States Shipping Board Emergency Fleet Corporation is hereby authorized and empowered within the limits of the amounts herein authorized.

(*a*) To purchase, lease, requisition, or otherwise acquire any improved or unimproved land suitable for the construction thereon of houses for the use of employees of shipyards in which there are now being constructed ships for the United States.

(*b*) To construct on such land houses and all other necessary or convenient facilities, upon such conditions and at such price as may be determined, and to sell, lease, or otherwise dispose, of such houses, land, and facilities upon such terms and conditions as it may determine.

(*c*) To purchase, lease, requisition, or otherwise acquire, any houses or other buildings, together with the land on which the same are erected, and all necessary and proper furnishings therefor; to manage, repair, sell, lease, or otherwise dispose, of such houses and buildings upon such terms and conditions as it may determine.

(*d*) To cancel, modify, suspend, or requisition any existing or future contract relating to the purchase, lease or mortgage of any such land or building. All houses, land, facilities, and furnishings acquired as herein provided shall be leased, sold or otherwise disposed of only to persons now or hereafter employed in the shipyards constructing ships for the United States.

Whenever said United States Shipping Board Emergency Fleet Corporation shall purchase, lease, requisition or otherwise acquire such land or such houses, or shall cancel, modify, suspend, or requisition any such contract, it shall make just compensation therefor, to be determined by it, and if the amount thereof so determined by it is unsatisfactory to the person entitled to receive the same, such person shall be paid seventy-five per cent of the amount so determined by it, and shall be entitled to sue the United States to recover such further sum as added to such seventy-five per cent will make up such amount as will be just compensation therefor in the manner provided for by section twenty-four, paragraph twenty, and section one hundred and forty-five of the Judicial Code.

The power of purchasing, leasing, requisitioning, or otherwise acquiring, such land and houses herein granted shall cease six months after the termination of the present war with Germany.

The word "person" used herein shall include any person, trustee, firm, or contractor. The word "shipyard" shall include any factory, workshop, warehouse, engine works, buildings used for manufacturing, assembling, construction or other process in shipyard and dock yards and discharging terminal, and other facilities connected therewith, now or hereafter used in connection with shipbuilding.

The cost of purchasing, leasing, requisitioning, or otherwise acquiring houses, lands, facilities, or furnishings shall not exceed the sum of $50,000,000, the expenditure of which is hereby authorized, and in executing the authority granted by this act for such purpose, the said United States Shipping Board Emergency Fleet Corporation

shall not expend or obligate the United States to expend more than the said sum, and there is hereby appropriated for such purpose $25,000,000.

All acts inconsistent with the exercise of the powers herein granted to the extent that said acts are inconsistent are hereby repealed.

An act to amend the emergency shipping fund provisions of the urgent deficiencies appropriations act approved June thirtieth, nineteen hundred and seventeen, so as to empower the President and his designated agents to take over certain transportation systems for the transportation of shipyard and plant employees, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section one of the emergency shipping fund provisions of the urgent deficiency appropriation act of June fifteenth, nineteen hundred and seventeen, is hereby amended by adding a new provision reading as follows:

(*f*) To take possession of, lease or assume control of any street car, railroad, interurban railroad, or part thereof wherever operated by steam or electric power and all appurtenances and franchises or parts thereof commonly used in connection with the operation thereof to the end that the same be utilized for the transfer and transportation of employees of shipyards or plants engaged or that may hereafter be engaged in the construction of ships or equipment therefor for the United States.

Sec. 2. That section three of said act is hereby amended by adding after the word "material" in the fourth line of said section the following words, "or take possession, lease or assume control of any street car, railroad, interurban railroad or part thereof."

An act to authorize and empower the President to create military zones around shipyards where vessels are under construction for the United States.

Be it enacted by the Senate and House of Rerresentatives of the United States of America in Congress assembled, That the President of the United States of America, as Commander in Chief of the Army and Navy, be, and he is hereby, authorized and empowered from time to time to create and establish within defined areas surrounding any shipbuilding plant where vessels are under construction for the United States of America a military or war zone: that such designated area shall be directly under the control of the President with the right and authority to treat such area as if it were a fort, camp, or other military establishment of the United States of America, and that all laws applicable to forts, camps, or other military establishments shall be applicable to the zone or area so designated: and any person, persons, firm, or corporations who shall violate any such law shall be punishable in the manner therein provided. Should it become necessary or desirable to take over, or occupy, or use any buildings, land, or other property within such area the United States may acquire such property or the use thereof by purchase, requisition, or otherwise, and shall make just compensation therefor to be determined by the President, and if the amount thereof so determined by the President is unsatisfactory to the person entitled to receive the same, such person shall be paid seventy-five per centum of the amount so determined by the President and shall be entitled to sue the United States of America to recover such further sums as added to seventy-five per centum will make up such amount as will be just compensation therefor, in the manner provided for by section twenty-four, paragraph twenty, and section one hundred and forty-five of the Judicial Code.

The President may exercise the power and authority hereby vested in him through the several departments of the Government, and through such agency or agencies as he shall determine from time to time.

Senator JONES. I should like to call your attention, Admiral Bowles, to a part of a telegram which has been handed to me to-day. The telegram reads as follows; it is from Tacoma, Wash. [reading]:

Tacoma Shipbuilding Co. equipped to build 12 ships; has been given orders for 4 contracts—

I assume that that means four ships.

The Government will not permit them to take private contracts offered them. Government's survey shows stockholders individually worth $8,000,000.

They seem to think they ought to have contracts for 12 ships, and say that their company is equipped to handle them. Admiral Bowles, do you know anything about the facts with reference to that company?

Admiral BOWLES. Is that the Tacoma yard of the Todd Shipbuilding Corporation?

Senator JONES. No, I think not; it just says "Tacoma Shipbuilding Co."

Admiral BOWLES. I know nothing whatever about it.

Senator JONES. Well, will you have that matter looked up?

Admiral BOWLES. I will have that looked up.

Senator JONES. Because if these people are equipped to handle 12 ships, they ought to be permitted to do so.

Admiral BOWLES. These are wooden vessels, I presume?

Senator JONES. I suppose so.

Admiral BOWLES. They have a contract now for four wooden hulls.

Senator JONES. That is what they say in their telegram; and they say they are equipped to handle 12 ships.. Now, if they can do that, I hope that action will be taken so that they will be given an opportunity to help the Government in this emergency. I wish you would examine into that.

Admiral BOWLES. I will do so.

Senator NELSON. How many ways have they?

Admiral BOWLES. They have three ways.

Senator JONES. Admiral Bowles, I want to ask you now to state for the record, with reference to the Sloan Shipyards Corporation, substantially the facts that you stated in the executive session of the committee the other day. I think the statement ought to be in the record giving the facts with reference to the organization of that company and what the Government had to do, what the situation is now, and why you think that the arrangement that is now in existence should have been made. And I will ask you to proceed in your own way and state the facts just as you have stated them to the committee in executive session.

Admiral BOWLES. This contract was executed on the 18th day of May, 1917, being contract No. 6. It provided for the construction of 16 wooden steamers at the lump-sum purchase price of $490,000 each. These 16 steamers included 4 which were under construction for the Clinchfield Navigation Co.

Senator JONES. Where was this Clinchfield Navigation Co. located?

Admiral BOWLES. The Clinchfield Navigation Co. is a company doing general shipping and brokerage business in New York.

Senator JONES. More brokerage than shipbuilding, is it not?

Admiral BOWLES. They do no shipbuilding whatever, but they do operate some vessels of their own, I think.

Senator JONES. Well, what do you mean by doing a brokerage business in connection with shipping?

Admiral BOWLES. Buying and selling ships.

Senator JONES. They are located in New York? Do you know who the members of this company are?

Admiral BOWLES. Well, I know one or two of them; I know two of them. I know Mr. Barnett, the vice president of the Clinchfield company, and I know one of the directors, Mr. Donhan.

Now, the Sloan corporation were building at the time this contract was made for wooden motor vessels for—well, it is rather doubtful whom they were for. They were first for a person named Archer, and then the Clinchfied Navigation Co. took over the contract, and then the contract finally appeared in the name of a man named Calkins.

Senator JONES. Do you know where Archer and this last man lived?

Admiral BOWLES. I do not. I know nothing of them at all, and they seem to be simply representatives of some unknown interests.

Senator NELSON. Will you excuse me, Senator Jones, if I ask a question here: How long before the contract was let to this Sloan Co. was the company incorporated? Was it incorporated immediately before the contract was let?

Admiral BOWLES. I do not know; it was formerly called the Seattle Dry Dock Co., and later the Sloan Shipyards Co., so that having contracted to build these four wooden motor ships before our contract was made, and having made some progress with them, they must have had some sort of a shipyard, but whether they were incorporated or not, I do not know. Our contract with them provided for two advance payments—11 per cent on each of the vessels, amounting to $862,400, 30 days after signing the contract; an additional 11 per cent, amounting to $862,400, 60 days after signing the contract, making a total advance payment of $1,724,800. These payments were to be made against sworn statements by the contractor that he had theretofore expended, or was committed on material contracts for expenditures to an amount equaling such payments.

Those payments were made. On June 16 the Sloan Co. received the first advance payment of $862,400, and on July 16, the second payment——

Senator NELSON (interposing). From the Government?

Admiral BOWLES. From the Government.

Senator JONES. Was that showing that you have just referred to made before those payments were made?

Admiral BOWLES. Mr. Sloan made statements showing that he had made commitments to the amount of $2,266,000, of which $210,000 has been paid, and he has paid out $25,000 additional for labor and material.

Senator NELSON. Who was this man Sloan, and what business was he engaged in before he got this contract?

Admiral BOWLES. Mr. Sloan and two brothers of his seemed to be engaged in a variety of kinds of business on the Pacific coast, in regard to ships; I do not know further than that; I only met one of them.

Senator JONES. Do the records of your corporation in closing these deals show anything about the business in which these men were engaged and their responsibility, etc.?

Admiral BOWLES. They do not. It seems that this was a very early contract and the files are very fragmentary as to information on these matters.

The CHAIRMAN. Did you give the date of the contract?

Admiral BOWLES. Yes, sir. The contract was dated May 18, 1917. In the latter part of August, we began to get reports that were very disquieting in regard to this company; and so we insisted on making an audit of their books. Now, that was not provided for in the con-

tract, and it was a stretching of our authority, but this audit disclosed that the Sloan Co. had expended for the Fleet Corporation $530,000 and that they had expended for indirect items, claimed to be applicable for the Fleet Corporation, $237,000. They had expended for purposes not connected with the Fleet Corporation vessels $509,000, leaving about $447,000 on hand out of the moneys advanced.

An investigation of the indirect items shows that the Sloan Corporation had invested $57,000 in the Capital City Iron Works, a concern owned by the Sloan Co. and which it was intended should manufacture engines for the Sloan Co.; $120,500 went to the Anacortes Shipbuilding Co., a concern owned entirely by the Sloans, to which the Sloans had assigned the building of six of the Fleet Corporation vessels; $60,000 was paid into the Wisconsin Lumber Co. as an advance payment on a timber contract; and in consideration of this advance, the lumber company was to give the Sloan Co. lumber at a reduced rate.

Of the $509,000 appropriated to other purposes, $317,000 went to the Clinchfield Navigation Co., in part payment of advances claimed to have been made by the Clinchfield Navigation Co., and of commissions to the Clinchfield Co. The rest of the $509,000 was used for private purposes of the Sloan Co.; for example, the Calkins motor ships and the construction of the plant, etc.

It also appeared—and this was the thing that disturbed me the most of anything—that they had made an advance payment to the Premier Engine Works, under a contract of that company to construct the engines for the Sloan Co. for our vessels.

These reports caused grave doubts of the responsibility of the Premier Iron Works, or its ability to build the engines. The reports likewise stated that the Wisconsin Lumber Co. would not make good its promise to supply lumber below the market prices.

Later, in November, it was found that under contracts between the Clinchfield Co. and the Sloan Co. there was an amount due the Clinchfield Co. under the Calkins contract, amounting to $296,000 and under the Fleet Corporation contract $579,000, making a total of $876,000, subject to some claims of adjustment by the Sloan Co. Under those circumstances we sent for Mr. Philip D. Sloan, the president of the Sloan Co. and we summoned the Clinchfield Navigation Co. to an interview; and although we had no actual right under the contract to do the things that we did, except on very narrow grounds, we insisted on making a new agreement with them, in which the Sloans were eliminated from the management and in which they were permitted to nominate the executive managers of the company, but they were subject to the veto of our district officer; that they must establish a proper method of keeping accounts; they must separate the cost of the Calkins motor ships from our vessels, and they must place their orders in places where they could be properly filled. And we placed the Clinchfield Navigation Co. in a situation where it could not collect any money from the Sloans until our contracts were finished.

We exacted from the Sloan Co. a mortgage of $750,000 upon its plant and we took all the bonds of the Capital City Iron Works, and the plant at Anacortes, which the Sloan Co. had as additional security.

Senator JONES. Did you ascertain what they actually had in those places?

Admiral BOWLES. In the way of property?

Senator JONES. Yes.

Admiral BOWLES. As far as we could.

Senator JONES. And what did you find?

Admiral BOWLES. We found that it looked as if it would be better to shut up those works altogether, but we did not feel justified in doing that. That is, I thought that I ought to be careful to do no unnecessary injury to the persons concerned, provided we could get our ships finished expeditiously.

Senator JONES. What did you find they were doing at Anacortes?

Admiral BOWLES. We found they were doing very little.

Senator NELSON. Had they a yard there?

Admiral BOWLES. Yes; they had a yard there, and they had a small amount of machinery.

Senator NELSON. Had they any ships on the way?

Admiral BOWLES. I think they had a couple of keels laid there. Our district officer was in favor of moving the facilities they had down to the Sloan yard and doing all the work there; and eventually I do not know but what that may be done. But I did not give those instructions.

Under this agreement we also provided that all their overhead expenses and salaries should be made subject to our approval. They had offices in New York and in Seattle in addition to their works, and we closed those up. Mr. Sloan had been receiving from his company $25,000 a year, and we cut that down to $10,000.

Senator NELSON. He is still getting that salary, but having nothing to do with the business. Is that true?

Admiral BOWLES. Nothing to do but to keep quiet and help us to keep things in order. I will admit, Senator Nelson, that that looks like too much money for the purpose, but you must remember that we were driving a bargain in a matter where we had no absolute rights, and we did the best we could. And I am responsible.

Senator JONES. Well, Admiral Bowles, did you have such a contract with the Sloan Co. that, under the conditions that you have enumerated, you could not forfeit that contract or take steps to protect the Government?

Admiral BOWLES. We had no restrictions on that money that we paid them. They were at perfect liberty to give it away or buy candy with it.

Senator JONES. And while, as you state, you were responsible for this last arrangement, you did not have anything to do with the original proposition?

Admiral BOWLES. Absolutely not.

Senator JONES. I want the record to show that, in justice to you.

I am going to ask, Mr. Chairman, that this contract with the Sloan company be made a part of the record—I mean the original contract.

Admiral BOWLES. What I have here is the original contract, and I would like to have the supplementary contract that we made with them also included.

Senator NELSON. Yes; let them both go in with Admiral Bowles's testimony so that we will have it all together.

Admiral BOWLES. I would like to have both go in so as to have this matter clear on the record.

The CHAIRMAN. Without objection, both the original and the supplementary contract with the Sloan Co. will be inserted in the record at this point.

(The contracts referred to are here printed in full as follows:)

Contract made this 18th day of May, 1917, between the Sloan Shipyards Corporation, a corporation organized under the laws of the State of Washington, party of the first part (herein called the Contractor), and the United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the Owner).

For valuable considerations, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual agreement of the parties, it is agreed as follows:

I. The Contractor hereby agrees to construct, at its own risk and expense, in accordance with drawings and specifications hereto attached and made a part of this contract, under the Rules and Regulations of the American Bureau of Shipping, sixteen (16) wood cargo-carrying steamers. The Contractor agrees to deliver said ships complete with propelling machinery, auxiliaries, and equipment to the Owner afloat at the works of Contractor at Olympia and Seattle, Washington, as follows:

The first ship to be delivered not later than January 31, 1918; two in February, 1918; four in March, 1918; and two each in April, May, June, and July, 1918; that is, the last ship to be delivered not later than July 31, 1918.

II. In consideration of the performance of this agreement by the Contractor the Owner agrees to pay therefor the sum of four hundred and ninety thousand dollars ($490,000) for each of such completed ships as follows:

(1) Eleven per cent (11) or fifty-three thousand nine hundred dollars ($53,900 for each of said ships within thirty (30) days after signing this contract upon production of a sworn statement, sworn to by an officer of the Contractor, that the Contractor has theretofore expended, or is committed on material contracts for expenditures on the work under this contract to, an amount equal to such payment;

(2) Eleven per cent (11) or fifty-three thousand nine hundred dollars ($53,900) within sixty (60) days after signing this contract, upon production of a sworn statement, sworn to by an officer of the Contractor, that the Contractor has theretofore expended, or is committed on material contracts for expenditures on the work under this contract to, an amount equal to such payment;

(3) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when the keel of each ship is laid and half in frame;

(4) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when all in frame and keelsons of each ship in;

(5) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when ship is three-quarters sealed, bottoms and bilges planked;

(6) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when cabin work is one-third completed;

(7) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when engines are ready for shipment from constructor;

(8) Thirteen per cent (13) or sixty-three thousand seven hundred ($63,700) upon acceptance of the ship by the Owner after sea trial: provided that as to all the above installed payments, after the first and second payments, no payment shall be deemed to be due at times fixed unless the amount of such installment, in addition to any theretofore paid and the proportion of the first and second payments is fairly represented in the progress of the work of construction on such ship together with the value of materials assembled at the Contractor's yard, and such fact is certified to by the Owner's inspector.

Before final acceptance the Owner may make, at Contractor's expense, a dock trial of not exceeding six hours, or a sea trial at some point convenient to Contractor's yard of not exceeding four hours. No inspector's certificate given or payment made under the terms of this contract (except on final payment) shall be conclusive evidence of the pefrormance of this contract, either in whole or in part, and no payment shall be construed to be an acceptance of defective work or improper materials. Every facility shall be afforded by the Contractor to the inspectors appointed by the Owner. It shall be the duty of such inspectors, either personally or by deputies, to inspect all materials and workmanship entering into the construction and to accept such materials and or workmanship as are in conformity with specifications and promptly to reject all materials and all workmanship which do not comply with the

specifications: such condemnation, if any, of materials to be made by such inspectors before the same are worked or put into construction, if opportunity so to do is afforded by the Contractor. Said inspectors shall also have the right of rejection after material is worked or put into construction if facilities are not given for inspection prior thereto.

III. The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions or substitutions not materially affecting the general design of the vessel as the Owner may deem necessary. The contractor agrees to accede to and carry the same into effect upon proper compensation or allowance being agreed therefor, as though such alterations, omissions, additions or substitutions were originally provided for in this contract. If by reason thereof, the cost of the construction hereunder shall be increased, then the sum to be paid by the owner to the contractor as herein provided shall be increased to an amount which shall be agreed upon. If the construction shall be rendered less expensive by reason thereof, the sum to be paid shall be decreased by an amount which shall be agreed upon. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions or the price thereof, the dispute shall be determined as provided by Article VII hereof. If the Contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the Owner, or by reason of alterations or additions by the Owner, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the Owner under Article XI, beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. The Contractor agrees to insure and keep insured at its own expense for the benefit of the Owner in insurance companies satisfactory to the Owner said vessels and all materials and supplies for and to be used in construction under this contract, against any and all damage by fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching during such construction and until final completion and delivery; such insurance to be in the usual form and to cover the interest of the Owner for an amount not less than the amounts of the installments of payment, which, from time to time, have been made (provided that the amount of insurance required shall not exceed, at any time, the amount available in the insurance market.)

V. It is agreed that if the Contractor shall materially fail to carry out the provisions of this contract and shall continue in default for a period of sixty days after notice thereof in writing from the Owner, or its inspectors, or if the Contractor shall fail to make progress on the work satisfactory to the Owner, then the Owner shall have the power and right to enter into and take possession of said vessels and all materials and appliances in connection therewith, and in a reasonable and economical manner, for account of the Contractor, to complete the work called for in this contract at the yards of the Contractor or otherwise. After taking over the work in this manner, the Owner shall pay the Contractor on account of profit only a reasonable rent for the Contractor's yard and facilities used.

Provided, however, that if the Contractor can show to the satisfaction of the General Manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caued by circumstances over which he has no control, the Contractor shall be allowed such opportunity as the General Manager of the Owner may deem reasonable to complete the work within the time prescribed by this contract

VI. It is agreed that as the payments provided for herein are made by the Owner on account of materials ordered by or assembled or set up in the yard of the Contractor or used in the construction hereunder, the same to the extent of the payments made shall become the property of the Owner. This change of title, however, shall not be construed as a waiver by the Owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the General Manager of the Owner or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case after delivery of a completed vessel to the Owner under this contract (but only in that event) the Contractor shall deem that it is aggrieved by any decision of the General Manager either as to any disputed matter hereunder of any kind, and shall give notice to the Owner to that effect within thirty days after delivery or after final payment by the Owner, such matter shall be determined by a Board which shall consist of three naval architects or engineers or experts to be appointed, one by the Owner, one by the Contractor, and one by the American Bureau of Shipping. Such Board shall within thirty days after submission of such matter to it determine what, if any, further sum shall be due by the Owner to the Contractor hereunder on account of such delivered vessel, and its finding (made by a majority of the Board) shall be conclusive on both parties.

VIII. It is agreed by both parties that time is of the essence of this contract. The Contractor agrees to commence and carry through to completion the work under this contract with dispatch, and that it will not hereafter enter into any other contract or undertake any other work or service at its yard which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. The Contractor agrees to deliver the vessel to the Owner free from any lien or encumbrance. In the event of the filing of any lien or encumbrance against said hulls before final payment on account of any person, firm, or corporation furnishing labor or materials for said construction under this Contract, the Owner may satisfy the same out of any amount not paid to the Contractor hereunder, or the Owner may, at its option, withhold the amount thereof from any installment payment thereafter coming due hereunder.

X. The Contractor agrees to protect the Owner from all claims arising from accidents or casualties to employees or workmen on or about the work covered by this contract, and to indemify the Owner against the same.

The Contractor shall be responsible for all claims, if any, made against the Owner for any infringements of patents or patent rights and for the use of any patented articles, and shall defend and save harmless and indemnify the Owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringement of patents or patent rights, or of the use of any patented articles, PROVIDED that the Owner will, in all instances, notify the Contractor of any claims made against it by reason of any such infringement or use of patented articles, at the time when such claim is made, and will promptly notify the Contractor of any suit or suits brought against it therefor and give the Contractor an opportunity to defend same, and PROVIDED that no payment shall be made by the Owner unless with the consent of the Contractor or pursuant to a decree by a proper court in such litigation.

XI. Until and unless otherwise instructed by the Owner, the Contractor shall pay for all labor under this contract a scale of wages equal to the scale of wages paid for the same service in the United States naval shipyard nearest to the Contractor's yard, and the Contractor shall from time to time change such scale as the scale may be changed by such naval shipyard. No strikes on the part of labor employed by the Contractor under this contract and no lock-outs against labor by the Contractor under this contract will be permitted. All disputes involving the relation of the Contractor to labor employed under this contract must be submitted for decision in writing to the Conciliation Service of the United States Department of Labor. Such submission in writing shall be by a committee of three selected for the Contractor's yard in such manner as the Owner may direct.

The Contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the Owner. If by reason of any such instruction or increase of naval shipyard scale after this contract is executed, the cost of any ship hereunder shall be increased, then the sums to be paid by the Owner to the Contractor as herein provided for such ship shall be increased by such amount. Such amount shall be agreed upon by the parties, and if not agreed upon shall be determined as provided in Article VII hereof.

XII. This contract may not be assigned by the Contractor without the consent of the Owner.

XIII. Payments hereunder shall be made by the Owner by check addressed to the Contractor by mail at the Equitable Trust Company, Wall Street, New York City.

In witness whereof the parties hereto have caused this contract to be signed by their respective officers and their corporate seals to be hereunto affixed, duly attested on the day above stated.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
By WILLIAM DENMAN, *President.*

Attest:
GERARD C. HENDERSON,
Secretary.

SLOAN SHIPYARDS CORPORATION,
By LE ROY RICHARDS, *Vice President.*

Attest:
CHAS. W. POWELL.

(A duplicate of the supplementary contract referred to is here printed in unsigned form, the original not being available:)

NEW CONTRACT BETWEEN SLOAN CO., CLINCHFIELD CO., AND EMERGENCY FLEET CORPORATION, SIGNED BY CLINCHFIELD, FLEET CORPORATION, AND APPROVED BY SLOAN'S ATTORNEYS, NOW IN BLAIN'S HANDS.

Agreement entered into this 8th day of December, 1917, by and between the Sloan Shipyards Corporation, a corporation organized under the laws of the State of Washington, party of the first part (hereinafter called the Contractor), the United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (hereinafter called the Owner), and the Clinchfield Navigation Company (Inc.), a corporation organized under the laws of the State of New York, party of the third part (hereinafter called the Clinchfield Company).

Whereas the Owner and the Contractor, on the 18th day of May, 1917, entered into a contract (hereinafter called the shipbuilding contract) for the construction of sixteen (16) wooden cargo-carrying steamers (herein called the Fleet Corporation vessels), and

Whereas the Contractor, on the 20th day of June, 1917, entered into a subcontract (hereinafter called the Anacortes Contract) with the Anacortes Shipbuilding Company, for the construction of six (6) wooden cargo-carrying steamers, being part of the sixteen (16) steamers to be built by the Contractor for the Owner; and

Whereas the Owner claims that the performance by the Contractor under the shipbuilding contract is unsatisfactory, and insufficient, and that the making of the Anacortes Contract was in violation of the terms of the shipbuilding contract; and

Whereas, the Contractor has expended part of the first two payments made to it under the shipbuilding contract for purposes other than the payments for labor, material, and overhead expenses entering into the construction of Fleet Corporation vessels; and

Whereas the Contractor and the Clinchfield Company have agreed and have so stated to the Owner:

(*a*) That on the 30th day of December, 1916, the Contractor entered into four (4) certain contracts with the Clinchfield Company for the construction of four (4) wooden motor ships, which contracts were later canceled upon the payment by the Contractor to the Clinchfield Company of $300,000.00 in cash and the delivery of an order dated June 6, 1917, signed by the Contractor and accepted by one R. M. Calkins, with whom the Contractor entered into a contract on the 5th day of June, 1917, for the construction of said four (4) wooden motor ships (herein called the "Calkins vessels"), by which order and acceptance the Contractor and said Calkins agreed to pay to the Clinchfield Company the sum of $21,166.66 from each of the six (6) payments of $62,500 falling due on each of the four vessels, subject to the conditions of said contract dated June 5, 1917, and pursuant thereto the Clinchfield Company has received from the Contractor and said Calkins on said vessels $511,666.60, leaving a balance of $296,333.40 still due the Clinchfield Company on the Calkins vessels;

(*b*) That the Contractor by a written agreement, dated June 6, 1917, stated the amount then due the Clinchfield Company from the Contractor in connection with the Fleet Corporation vessels to be the total sum of $579,852, which sum the Contractor agreed to pay to the Clinchfield Company in six installments of thirteen per cent on each steamer as and when said installments were received by it, and said total sum is subject to reduction by the actual cost of certain changes in the first four vessels now being constructed under the shipbuilding contract to make vessels conform to the specifications of the shipbuilding contract. (The claims of the Clinchfield Company for money due to it as aforesaid in connection with the Calkins vessels and the Fleet Corporation vessels are herein referred to as the Clinchfield indebtedness).

Now therefore, in consideration of the premises and of the mutual agreements herein contained and of other good and valuable consideration, the parties hereto do hereby agree as follows:

I.

Until the completion, delivery, and acceptance of all of the Fleet Corporation vessels, all monies of the Contractor now on hand or hereafter received by it or accruing to it under or on account of this contract, the shipbuilding contract, the Calkins contract, or otherwise, and all monies assigned to the Owner under this contract shall

be placed in a special account or accounts (herein referred to as the special account) in such depositary or depositaries as may be selected by the Owner, and shall be subject to be withdrawn only upon the approval of the Owner, evidenced in such manner as the Owner may provide. Such monies shall be used only for the purposes hereinafter provided, and until so expended the title thereto shall be in the Owner. The Contractor hereby assigns to the Owner all of its right, title, and interest in and to monies hereafter coming due under the Calkins contract, as well as those now or hereafter deposited in escrow thereunder.

II.

Until the completion, delivery, and acceptance of all of the Fleet Corporation vessels the monies aforesaid shall be expended only for labor, material, and proper overhead expenses entering into the construction of the Fleet Corporation vessels and the Calkins vessels.

The Owner may likewise approve the expenditure from said funds, for land and (or) for such extensions or additions to the plants at Olympia and at Anacortes as may be agreed upon between the Owner and the Contractor.

If the Owner desires, it may establish a separate account (title to which will be in the Owner until expended), out of which payments will be made for labor, material, and proper overhead expenses entering into the construction of the Calkins vessels. (This separate account is herein referred to as the Calkins account.) In such event the Owner may place such restrictions upon the disbursement of the Calkins account as will, in its opinion, insure the disbursement of the said fund for labor, material, and overhead expenses in connection with the construction of the Calkins vessels, and for no other purposes; and may, to that end, require the employment, by the Contractor, of an auditor at the Contractor's expense, who will, if required by the Owner, give a bond for the faithful performance of his duties.

The amount to be expended upon the Calkins vessels, or, if the Calkins account is established, the amount to be paid into said fund shall not exceed in the aggregate the amounts coming due under the Calkins contract, plus two hundred thousand dollars ($200,000). Until the completion, delivery, and acceptance of the Fleet Corporation vessels, the Owner will advance from time to time such sums of money as may be necessary to meet the expense of constructing the Calkins vessels; but these advances shall not exceed by more than two hundred thousand dollars ($200,000) the moneys theretofore received by the Owner by virtue of the assignments made to it of payments under the Calkins contract.

III.

Until the completion, delivery, and acceptance of all of the Fleet Corporation vessels, the Owner will be under no obligation to make payments according to the schedule of payments contained in the shipbuilding contract, but will only make such payments (which payments, plus those already made, shall not exceed, except at the Owner's option, the contract price under the shipbuilding contract) into the special account as may be necessary, in its opinion, to carry on satisfactorily the construction of the Fleet Corporation and the Calkins vessels. The Owner will endeavor to have funds available so as to enable the Contractor to take advantage of all trade discounts.

IV.

(*a*) The Contractor shall, at its own expense, immediately proceed to execute or cause to be executed to a trustee, to be agreed upon (herein called the Trustee), a mortgage or mortgages in form approved by the Owner, which shall constitute a first lien upon the following property:

1. The lease of the Olympia yard, with all the right, title, and interest of the Contractor therein, and the title to said yard if subsequently acquired by the Contractor, together with all the plant, equipment, and improvements of the Contractor now owned or hereafter acquired.

2. The shares of the capital stock and the real estate and all improvements thereon of the Capital City Iron Works, together with all equipment and improvements now owned or hereafter acquired by said Capital City Iron Works.

3. The shares of the capital stock and the real estate, equipment, and improvements now or hereafter owned and acquired by the Anacortes Shipbuilding Company.

(*b*) The said mortgage or mortgages shall secure an authorized bond issue of the par value of $750,000, consisting of seven hundred fifty (750) six per cent (6%) gold bonds of the par value of one thousand dollars ($1,000.00) each. The said bonds (herein called the Sloan bonds) shall mature on October 1, 1916, and shall contain such provisions as to interest as shall be acceptable to the Owner and Contractor.

(c) The Contractor hereby assigns to the Owner all of its right, title, and interest in and to any and all bonds of the Wisconsin Timber Company of Stamwood, Washington, in which it now has or may hereafter have an interest. Bonds of the par value of the hundred thousand dollars ($100,000) are now held in trust by the Scandinavian Bank, Seattle, Washington, as collateral security for the indebtedness of the Wisconsin Timber Company to the Contractor, subject to the terms of a contract, a copy whereof will be furnished to the Owner. The interst so assigned is hereafter referred to as the timber bonds.

(d) The timber bonds and the Sloan bonds shall be held by the Owner to secure:

1. The performance of the shipbuilding contract and the terms hereof.

2. The repayment of any monies advanced to complete the Calkins vessels in excess of the sums received by the Owner as payments under the Calkins contract.

3. In the event that the Owner's net expenditures for the construction of the Fleet Corporation and Calkins vessels exceeds the contract price under the shipbuilding contract, proper allowance being made for alterations, to secure the repayment of such excess and of damages for delay, if any.

By "net expenditures" is meant the monies paid by the Owner out of its own funds and not reimbursed to it out of funds received under the Calkins contract, or otherwise.

After the terms of the shipbuilding contract have been performed, or the Owner indemnified for nonperformance, and after the repayment of the monies as provided in subsections 1, 2, and 3, the timber bonds and the Sloan bonds shall be held by the Owner or at Owner's option, delivered to a Trustee named by the Contractor and the Clinchfield Company to secure the payment of the Clinchfield indebtedness

(e) The Owner will consider the release of any of the Sloan bonds not required to secure it or the Clinchfield Company, provided that the monies obtained for the sale thereof or borrowed against them as security are paid into the Special Account.

V.

The Contractor shall install and maintain at its own expense an accounting system which will be satisfactory to the Owner, and shall enable the Contractor to segregate, so far as may be reasonably possible, the amounts expended in connection with the Fleet Corporation vessels from those expended in connection with the Calkins' vessels.

VI.

(a) All salaries and overhead expenses and all contracts in connection with the construction of the Fleet Corporation and Calkins' vessels shall be subject to the approval of the Owner.

(b) The Contractor will close its New York office and, unless the district officer shall decide otherwise, its Seattle office.

(c) After December 1, 1917, Mr. P. D. Sloan may draw on account of salary at the rate of ten thousand dollars ($10,000) a year and no more until the Fleet Corporation vessels and the Calkins' vessels are completed, and until the claims of the Owner and the Clinchfield indebtedness are paid in full. Immediately upon the execution of this contract, Mr. Sloan shall, until the completion of the Fleet Corporation and the Calkins' vessels retire from the executive management and operation of the plants at Olympia and Anacortes, and of the construction of the Calkins' and Fleet Corporation vessels and of all contracts and commitments in connection therewith. The executive management of the plants and of such construction shall be placed in the hands of such person or persons as may be nominated by the President of the Contractor and approved by the Owner; if no person satisfactory to the Owner is named, the Owner may make the appointment. Mr. Sloan may continue as president and chairman of the board of directors of the Contractor.

(d) The Owner shall have the right to require the removal of, and to approve before it shall become effective, the appointment of or removal of any officer or employee of the Contractor and of the Anacortes Shipbuilding Company and Capital City Iron Works, and shall have the further right to shift the officers and employees of the Contractor from one yard to the other or to change the scope of their work or duties. The Contractor, if it feels aggrieved at any decision of the Owner under this subsection or under subsection (c), may refer the matter to Admiral Bowles or his successor in office, whose decision shall be final.

(e) Until the completion, delivery, and acceptance of all the Fleet Corporation vessels, the Contractor will not permit, without the consent of the Owner, the making of any contract for the construction of additional vessels at Olympia or Anacortes, or for the use of either of said plants, or for any other purpose which may directly or indirectly affect or interfere with the ability of the Contractor to carry out the provisions hereof and of the shipbuilding contract.

VII.

The Contractor will execute such agreements and do such acts as the Owner may deem necessary to carry out the intent of this agreement (including such as the Owner may deem necessary to secure the lien of the mortgage or mortgages upon after acquired property), and the Contractor shall cause such instruments to be executed and such acts to be done by the Anacortes Shipbuilding Company and by the Capital City Iron Works as the Owner may deem necessary to give to the Owner the same title to ships and materials in the Anacortes yard and in the yard of the Capital City Iron Works as is given to the Owner under the shipbuilding contract to the ships and the materials in the Olympia yard.

VIII.

Neither the Owner nor Contractor waives any claim for any default under the shipbuilding contract, but if the shipbuilding contract as modified by this agreement is complied with, no claim shall be made by the Contractor against the Owner or vice versa, except that the Owner may claim damages for delay on the part of the Contractor, but this claim the Contractor will be entitled to dispute.

IX.

The Clinchfield Company consents to the foregoing provisions so far as its interests may be involved, and agrees further—

(*a*) To assign to the Owner to be deposited in the special account all payments made or accruing to it under the Calkins contract by reason of the terms of the order dated June 6, 1917, from and after the payment made on or about October 29, 1917, and all its rights in the funds deposited in escrow under the Calkins contract.

(*b*) To defer attampting to enforce any claim it may have against the Contractor until completion, delivery, and acceptance of all of the Fleet Corporation vessels.

(*c*) That if the Owner shall faithfully perform the provisions of Article X hereof, the Owner shall be under no responsibility to the Clinchfield Company by reason of any of the terms of this agreement or any default or claimed default hereunder or by reason of the failure of the Clinchfield Company to receive payment of the Clinchfield indebtedness in full.

If the Clinchfield Company shall faithfully comply with the provisions of this agreement, by it to be performed, the Owner shall have no claim against it by reason of any transactions between it and the Contractor prior to the execution of this agreement.

X.

Upon the completion, delivery, and acceptance of all of the vessels under the shipbuilding contract the following provisions shall be in force:

(*a*) Except as provided in Article IV, section (*d*) hereof and except so far as the Owner may deen necessary to secure the payment of any claims against the Contractor on the part of the Owner or the Clinchfield indebtedness, (1) all restrictions upon the Contractor hereunder shall come to an end and, (2) the Sloan bonds in the possession of the Owner and the timber bonds shall be delivered and/or assigned to the Contractor.

(*b*) The Owner will pay (after withholding any amount which it may deem necessary to cover any claims which it may have against the Contractor for damages) the difference between the amounts payable under the shipbuilding contract and the net expenditures (as defined in Article IV hereof) made or incurred by the Owner for the construction of the Fleet Corporation and the Calkins vessels, and will reassign any monies unpaid under the Calkins contract as follows:

1. To the Clinchfield Company until it has been repaid the sum of $876,185.40, less the cost of changes in four of the Fleet Corporation vessels to meet the requirements of the shipbuilding contract. If the Clinchfield Company and the Contractor do not agree upon the amount to be deducted, then the amount in dispute shall be paid or assigned by the Owner to a trustee to be selected by the Owner, who shall hold the said sum pending the settlement of the dispute and pay thereout to the Clinchfield Company the amount thereof found to be due to it, and pay the balance to the Contractor. Such payment and (or) assignment shall relieve the Owner of any liability to either the Clinchfield Company or the Contractor to the extent of such payment and (or) assignment. It is understood, however, that any claim of the Contractor against the Clinchfield Company for additional commission, beyond $100,000 already paid, on the sale of the Calkins vessels is in no way prejudiced hereby.

2. The balance shall be paid or assigned to the Contractor.

(c) If any part of any monies withheld by the Owner to cover any claim for damages shall be decided by arbitration or other competent tribunal not to belong to the Owner, such monies shall be applied by the Owner as provided in subsections 1 and 2 of subdivision (b) of this Article.

Prior to the completion, delivery, and acceptance of all of the Fleet Corporation vessels, the Owner will, if the progress of the work is satisfactory, consider making such payments, removing such restrictions, making such reassignments and releasing such bonds as will not jeopardize the interest of the Owner or impair the security of the Clinchfield Company.

XI.

Except as herein otherwise provided, the provisions for settlement of disputes contained in Article VII of the shipbuilding contract shall be followed in connection with any disputes hereunder, except disputes solely between the Clinchfield Company and the Contractor.

And it is specifically understood and agreed that if, as the work progresses under the shipbuilding contract and after part of the vessels have been delivered to the Owner, there is any difference of opinion between the Owner and the Contractor as to entering into new contracts for the building of vessels on the ways thus left vacant, or as to the propriety of removing any of the restrictions hereby imposed, the Contractor shall have the right to call for the arbitration of such differences.

In witness whereof the parties hereto have caused this contract to be signed by their respective officers and their corporate seals to be hereunto affixed, duly attested, on the day and year above stated.

SLOAN SHIPYARDS CORPORATION,

[SEAL.] By .....

President.

Attest:

.....

Secretary.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,

[SEAL.] By .....

President.

Attest:

.....

Secretary.

CLINCHFIELD NAVIGATION COMPANY (Inc.),

[SEAL.] By .....

President.

Attest:

.....

Secretary.

The CHAIRMAN (continuing). Did you give the dates of the payments made to the Sloan Co., Admiral Bowles?

Admiral BOWLES. I did, Mr. Chairman; they were the 16th of June and the 16th of July.

Senator NELSON. They got over $2,000,000 altogether, did they not?

Admiral BOWLES. They got $1,724,000 and I think they got one or two other progress payments.

Senator NELSON. And you have not got a ship yet, have you?

Admiral BOWLES. Oh, no.

Senator JONES. Admiral Bowles, can you tell, or is there anybody connected with you who can tell, who carried on the negotiations with those people which resulted in that original contract?

Admiral BOWLES. Our records show, of course, that this contract was negotiated by Gen. Goethals and his counsel, Mr. Joseph P. Cotton.

Senator JONES. That is as far as your records show as to those who actually dealt with the matter?

Admiral BOWLES. Those are absolutely the only records that we have.

The CHAIRMAN. Do you know what they have accomplished so far? What has been done there?

Senator NELSON. How much have they done for the $1,700,000?

Admiral BOWLES. At the Olympia yards—that is the main establishment of the Sloan Co.—there are eight ways, and four are occupied by the Government ships and four by those four motor ships called "Cawkins vessels."

Senator NELSON. Well, they are not a part of the contract, the motor ships, are they?

Admiral BOWLES. No; but we have to get those vessels finished in order to get our vessels on those other four ways.

Senator NELSON. Yes?

Admiral BOWLES. Now, on December 1, we issued a record showing that three per cent of the whole contract was finished. That is, including everything that they had done; that is plans and material on hand, and vessels laid down, etc. At Anacortes there are five ways built.

Senator NELSON. Are there any ships on those ways?

Admiral BOWLES. There were three keels to have been laid in November, but I am not sure whether those were actually laid.

Senator JONES. Those were to have been laid after you made the supplementary contract?

Senator JOHNSON. What percentage of progress does that show?

Admiral BOWLES. That shows three per cent on the whole contract.

Senator JOHNSON. Now, Admiral Bowles, the whole contract was for how much money—in round figures?

Admiral BOWLES. Well, there are 16 vessels at $490,000 each.

Senator JONES. It is over $7,000,000 altogether?

Senator JOHNSON. Over $7,000,000.

Admiral BOWLES. $7,840,000.

Senator NELSON. Three per cent is completed of the entire contract and you have advanced $1,700,000 on it?

Admiral BOWLES. Yes, sir.

Senator NELSON. That is pretty liberal.

The CHAIRMAN. What is the type of vessels that they are building?

Admiral BOWLES. They were the Ferris type of wooden vessels.

The CHAIRMAN. Three thousand five hundred tons?

Admiral BOWLES. Yes, sir.

Senator JONES. Did you have any report on this company from your district officer?

Admiral BOWLES. Yes, sir; we had the——

Senator JONES (interposing). I mean before the contract was entered into.

Admiral BOWLES. The district officer's advice, apparently was never asked, because I have here [indicating] a record that on May 25 he wired Gen. Goethals for information as to whether the Sloan Shipyards Co. had a contract.

Senator JONES. That was after the contract was made?

Admiral BOWLES. That was after the contract was let.

Senator JONES. Yes; I think that is all that I care to ask about that just now.

Admiral BOWLES. Perhaps you would like to have me submit for your information the reports of our district officers which led up to the action that we took in this matter?

Senator JONES. I am not so much interested in that as I am as to why the contract was entered into in the first place. I can see the situation that the Fleet Corporation got into and I can see a justification for your action in making this last contract.

Senator JOHNSON. I do not know, Admiral Bowles, that the question is in order, but if it is I would like to ask for this information. When you found that sort of a tangle and called these people to account for it, what explanation was offered?

Admiral BOWLES. Well, the Clinchfield Navigation Co. alleged that they had supplied the whole capital for this business, that they had never known Mr. Sloan, but that he had been introduced to them as a "live wire" who was capable of getting things done.

Senator JOHNSON. I guess that was right.

Senator NELSON. Yes; he certainly was a "live wire."

Admiral BOWLES. They admitted that they had made a terrible mistake. That was all the explanation they gave.

Senator JONES. But you understand that they had gotten $400,000 in commissions out of it?

Admiral BOWLES. But they stand to lose some money by Mr. Sloan before they get through.

Senator JOHNSON. Was there any proposition made by them to return that $400,000 in any way?

Admiral BOWLES. No. As I stated, a portion of it undoubtedly was an advance and they claimed that they had advanced more than that.

Senator NELSON. Now, do you know the genesis of this New York company—what do you call it?

Admiral BOWLES. The Clinchfield Navigation Co.?

Senator NELSON. The Clinchfield Navigation Co. Do you know who were the principal parties interested in it?

Admiral BOWLES. I understand that it is a branch of——

Senator NELSON (interposing). Is it not a branch of the Steel Trust?

Admiral BOWLES. Not to my knowledge.

Senator NELSON. The reason that I asked that question was that the Joseph Cotton to whom you referred was, for many years at Duluth, Minn., known as the attorney of the Steel Trust.

Admiral BOWLES. The Clinchfield Navigation Co. is an offshoot of the Clinchfield Railway Co., according to the best of my knowledge.

Senator BANKHEAD. Is the Clinchfield Railway Co. the company which has a line running from the coal fields of West Virginia to Norfolk, Va.?

Admiral BOWLES. It runs from Charleston to the coal fields.

Senator BANKHEAD. Then that is not the road that goes into the city of Norfolk which was built by the late Mr. Rogers?

Admiral BOWLES. No; that is not the road.

Senator BANKHEAD. I believe you are right; I believe it is the Virginian Road that he built.

Admiral BOWLES. Yes, the Virginian Road. This is an entirely different road, and I do not think it goes into Norfolk.

Senator BANKHEAD. Yes; I remember the location of the Clinchfield Railroad now.

Admiral BOWLES. Mr. Joseph P. Cotton was the counsel for the Emergency Fleet Corporation, and he negotiated, helped Gen. Goethals to negotiate this contract for the Fleet Corporation.

Senator NELSON. Well, there was a Joseph P. Cotton, or a man of that name, that I knew very well was the attorney for the Steel Trust in Minnesota for a number of years; whether he was the same man or not I do not know; the name seemed to me to be the same.

The CHAIRMAN. This man lived in New York.

Senator NELSON. Well, the Mr. Cotton that I knew has moved to New York within the last few years; he is in New York now.

The CHAIRMAN. Admiral Bowles, do you know anything about the crippling of the lake transportation by taking boats from service on the Great Lakes?

Admiral BOWLES. I know that boats were taken from the lakes, but I had nothing whatever to do with that, Mr. Chairman; my opinion was not asked, and I had nothing whatever to do with it.

Senator HARDING. Admiral Bowles, Senator Johnson and I were curious to know about this: Did Mr. Sloan make this explanation, or did this corporation back of him make this explanation about the commission and prepayments for which Sloan was responsible?

Admiral BOWLES. Why, the Clinchfield Navigation Company people make it.

Senator JOHNSON. Well, was it the Clinchfield People or Mr. Sloan that said $400,000 had been paid as a commission for the obtaining of the contract? Was that not Mr. Sloan's claim, that he paid $400,000 to the Clinchfield people?

Admiral BOWLES. I think that was.

Senator JOHNSON. Did he not say that he paid them $400,000 as a commission for obtaining this specific contract?

Admiral BOWLES. I believe he did.

Senator JONES. In this conversation with Mr. Sloan, or with the Clinchfield people, did they state through whom they arranged this contract with the Emergency Fleet Corporation, or suggest anybody outside of the Emergency Fleet Corporation that assisted them in getting it?

Admiral BOWLES. Not in my conversation with them.

Senator JONES. You do not know anything about any suggestions of that kind?

Admiral BOWLES. Well, I only know what the record shows.

Senator JONES. Yes.

Senator HARDING. Admiral Bowles, did the Emergency Fleet Corporation have any practice of requiring a bond from people entering into these contractual relationships to protect the Government?

Admiral BOWLES. I think it has never been the practice to require a bond.

Senator HARDING. You do now, do you not?

Admiral BOWLES. Well, only in occasional cases. Where security is required the Fleet Corporation has been taking a mortgage on the plant rather taking a bond. The sums involved are such as to cause a great extra expense to everybody concerned.

Senator HARDING. Well, would you think that rather a surrender to a great emergency, or would you consider it a good business policy to make these advances without some——

Admiral BOWLES (interposing). Well, I think it is half and half; in many cases, I think the people would have been unable to furnish a bond.

Senator HARDING. I asked you the question because I just happened to be reading over a contract and I noticed in the second clause that this contractor furnishes a $500,000 bond guaranteeing the full and complete performance of the contract.

Admiral BOWLES. That is a recent contract, is it not?

Senator HARDING. Very recent.

The CHAIRMAN. Have you any idea, Admiral Bowles, of the value of the entire property on which the Fleet Corporation has a mortgage from these people?

Admiral BOWLES. Well, we have a mortgage of $750,000. What the value of the property is, I do not know.

Senator JONES. Do not the subsequent reports of your district officers show something about that?

Admiral BOWLES (after examining paper). Well, I see that the balance sheet of the Sloan Shipyards Corporation shows $2,654,000; but not all of these accounts are subject to the mortgage.

Senator JONES. What do these items consist of?

Admiral BOWLES. Buildings, machinery, and equivalent, $283,000; cash, $43,491; materials on hand, $289,000; machinery and equipment for vessels, $65,000; work in process, $292,000.

Senator JONES. Do the reports of your district officers verify these figures?

Admiral BOWLES. Yes, sir. This [indicating] is all in the report of the district auditor, and all these items have been verified by the district auditor.

Senator JONES. I have not examined this subsequent contract, but is there any provision or understanding, if these ships are constructed at a less cost than the original contract price, as to what shall be done with the difference?

Admiral BOWLES. We turn everything over to them as soon as our ships are finished, including any money that is left; after everything is paid that they owe, we relinquish all rights under this new contract. In other words, we want to get our ships finished and then get clear of it all.

Senator JONES. But suppose the cost is $6,000,000 for these ships, will you pay them then $1,800,000?

Admiral BOWLES. After paying everything that is owing us——

Senator JOHNSON (interposing). Well, the fact of this is that you can work this out so that the Government ultimately will lose nothing?

Admiral BOWLES. It looks to me as if we will lose nothing.

Senator NELSON. You think the Government will lose nothing in the end?

Admiral BOWLES. I think not.

Senator NELSON. Well, when are you likely to get those ships?

Admiral BOWLES (continuing). There ought to be ample profit in those ships to make up for the slack that has existed so far.

Senator NELSON. When are you likely to get those ships, do you think.

Admiral BOWLES. These ships ought to be delivered, I think——

Senator NELSON (interposing). This year?

Admiral BOWLES. I think they ought to be delivered surely in eight or nine months from now.

Senator JONES. Well, you have practically control of their construction now.

Admiral BOWLES. We have.

The CHAIRMAN. Do you have any trouble in getting timber there?

Admiral BOWLES. The timber is coming slowly.

The CHAIRMAN. Do you know if there is any trouble out in the woods?

Admiral BOWLES. I do not know about the situation at the present time.

Senator NELSON. There has been trouble?

Admiral BOWLES. There have been strikes.

Senator NELSON. There has been trouble out in the woods in getting out the lumber?

Admiral BOWLES. Yes, and there has been trouble between the unions in getting men to work on 10-hour lumber.

Senator NELSON. Because the lumber men are working 10 hours and they have objected on that account?

Admiral BOWLES. Yes.

Senator JONES. I understand that those labor troubles have been adjusted recently. How long that will continue, of course, I do not know.

Senator NELSON. The Secretary of Labor, Mr. Wilson, has recently been out there and has just returned, but we have not yet had any report from him, so we do not know what he has accomplished.

The CHAIRMAN. Do you use green fir in the construction of the ships there?

Admiral BOWLES. Yes, sir. The question has been asked me about the price of this lumber being bought on the Pacific coast, and I have ascertained from the purchasing officer of the fleet corporation that he has ordered fir on the Pacific coast for 60 vessels, with an option on fir for 40 additional vessels at $35 per thousand feet f. o. b. the mills.

Senator NELSON. Delivered at the mills?

Admiral BOWLES. Yes. There are two exceptions to that; in one case where he paid $30 and one case where he paid $40.

Senator NELSON. Do you know whether transportation is accessible to those mills by either rail or water?

Admiral BOWLES. I do not.

The CHAIRMAN. Do you know whether green fir has been used in the past in the construction of ships?

Admiral BOWLES. I think so. I know it is all green in the vessels we are building. But my recollection of such fir as I have dealt with is that there is but very little sap in fir, and it is not objectionable to use it green.

Senator JONES. Probably it might be well to have those subsequent reports by your district officers in connection with this Sloan matter.

Admiral BOWLES. These are the reports of the district auditor——

The CHAIRMAN. Before you pass that, does your observation with regard to fir that you use green apply to hard pine?

Admiral BOWLES. There is no objection to using hard pine when it is green.

I should like to hand you for your information the reports of the district auditor on the Sloan Shipyard Corporation, one for the period ending August 31, 1917, and one for the period ending October 31. These are the reports on which the subsequent action was based.

The CHAIRMAN. Does the committee wish that inserted in the record?

Senator NELSON. Yes; I think that ought to go in with the other.

Senator JOHNSON. I have just been informed that an injustice was unintentionally done Mr. Cotton a few moments ago. I do not know the gentleman or any gentleman of that name, but I am told that the Cotton who represented the Fleet Corporation is not the Mr. Cotton that the Senator from Minnesota had in mind, that he has never resided in Minnesota.

Senator NELSON. Who is he? Who is he connected with?

Senator JOHNSON. The gentleman who spoke to me said he was a partner of ex-Senator Spooner—Spooner & Cotton, of New York.

Senator NELSON. Didn't he also say he was now with Mr. Hoover?

Senator JOHNSON. I am informed that he is.

Senator NELSON. That accounts for coal and so many things being higher.

Senator JOHNSON. I thought an injustice unintentionally had been done an individual whom I did not know, and I merely wanted to correct the injustice; that is all.

Senator NELSON. I do not know whether he is the same man or not.

Senator JOHNSON. I know nothing about him except what I am informed here.

Senator NELSON. I know the Cotton I referred to moved to New York three or four years ago.

Senator JOHNSON. New York is quite a little village.

Senator NELSON. Yes.

Admiral BOWLES. I would suggest that these district auditors' reports be not printed in the record. There is a great mass of figures here.

The CHAIRMAN. I should imagine it would not be advisable to print the whole.

Senator JONES. Are there any parts of that, Admiral, that you think ought to go in the record as showing the full justification for this final contract and final arrangement you have made with reference to Mr. Sloan—which, I can see, might create some criticism by somebody who wanted to criticize?

As I understand, in making this arrangement you have done what you thought was best in a bad situation. If there is anything in those reports that you would like to have put in the record in connection with that matter, I would suggest that you indicate them and they can go in without putting in all the reports.

Admiral BOWLES. I would suggest that the first portion of these reports prior to the signature of Mr. John Purse, the district auditor, should be printed in each case, but the appendixes and balance sheets and additional correspondence can be properly omitted.

(The reports referred to by Admiral Bowles are here printed in full, as follows:)

[Contract No. 6 W. C. Date of contract, May 18, 1917.]

SLOAN SHIPYARDS CORPORATION,
Seattle, Wash., September 14, 1917.

Capt. J. F. BLAIN,
District Officer:

In accordance with your instructions, and in accordance with the instructions contained in a letter from the senior aid to the general manager of the Emergency Fleet Corporation, of which letter the following is a copy, I had an examination made of the books and records of the Sloan Shipyards Corporation in so far as they related to the moneys received, and disbursements made on account of the vessels to be constructed under contract No. 6 W. C.

Letter above referred to:

From: Senior aid to general manager.
To: Auditor.
Contract No. 6, Sloan Shipyard Corporation, overpayment on contract.
Reference (a) file 14–73, part 1.
Reference (b) letter from district officer, San Francisco, August 6.

DEAR SIR: Letter, reference (a), which appears in file, reference (b), seems to indicate that there has been a payment made on contract No. 6 to the Sloan Shipyard Corporation without requiring any percentage of the work to be done on the ships, or the material to be supplied therefor.

Paragraph I, section 2, of the contract with this company, dated May 18, specifically provides that the second payment which is to be made within sixty days after the signing of the contract requires the production of sworn statements by an officer of the contractor that the contractor has theretofore expended, or is committed on material contracts for expenditures on the work under the contract, to an amount equal to such payment.

Please investigate immediately the character of the vouchers furnished in connection with the second payment on this contract, and if the views of the district officer are confirmed, make no further payments under this contract until further advice; and also take such steps as will fully safeguard the interests of this corporation in the second payment.

Very truly, yours,

(Signed) E. SNOW.

It will be noticed that the last part of above letter requests that such steps be taken as will fully safeguard the interests of this corporation in the second payment. I have to point out, however, that the second payment under this contract was made on July 14, 1917, or quite a considerable time before the receipt of the above letter.

CONTRACT.

The Contract entered into between the Sloan Shipyards Corporation and the United States Shipping Board Emergency Fleet Corporation provides for the construction of sixteen (16) wood cargo-carrying steamers by the Sloan Shipyards Corporation, the first ship to be delivered not later than January 31, 1918; two in February, 1918; four in March, 1918; and two each in April, May, June, and July, 1918; that is, the last ship to be delivered not later than July 31, 1918.

The terms of payment, as contained in the Contract, are: The Owner agrees to pay the sum of $490,000 for each of said completed ships, as follows:

"(1) Eleven per cent (11) or fifty-three thousand nine hundred dollars ($53,900) for each of said ships within thirty (30) days after signing this contract upon production of a sworn statement, sworn to by an officer of the Contractor, that the Contractor has theretofore expended, or is committed on material contracts for expenditures on the work under this contract to, an amount equal to such payment;

"(2) Eleven per cent (11) or fifty-three thousand nine hundred dollars ($53,900) within sixty (60) days after signing this contract, upon production of a sworn statement, sworn to by an officer of the contractor, that the Contractor has theretofore expended, or is committed on material contracts for expenditures on the work under this contract to, an amount equal to such payment;

"(3) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when the keel of each ship is laid and half in frame;

"(4) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when all in frame and keelsons of each ship in;

"(5) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when ship is three-quarters sealed, bottoms and bilges planked;

"(6) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when cabin work is one-third completed.

"(7) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) when engines are ready for shipment from constructor;

"(8) Thirteen per cent (13) or sixty-three thousand seven hundred dollars ($63,700) upon acceptance of the ship by the Owner after sea trial:

"Provided, that as to all the above installment payments after the first and second payments, no payment shall be deemed to be due at time fixed unless the amount of such installment, in addition to any theretofore paid and the proportion of the first and second payments is fairly represented in the progress of the work of construction on such ship, together with the value of materials assembled at the Contractor's yard, and such fact is certified to by the Owner's inspector."

Immediately the first payment above mentioned fell due, Mr. Philip D. Sloan, president of the Sloan Shipyards Corporation, called at this office with a request for the payment, and submitted an affidavit in terms of the contract, of which the following is a copy:

CERTIFICATE OF PAYMENT.

This is to certify That we have heretofore expended and are committed on material contracts for expenditures on the work under our contract with the United States Shipping Board Emergency Fleet Corporation, dated May 18th, 1917, in excess of Eight hundred and Sixty Two Thousand Four Hundred ($862,400.00) Dollars, on Ships known as Hulls Nos. 40 to 55, inclusive, and hereby make request for Eight Hundred and Sixty Two Thousand Four Hundred ($862,400.00) Dollars, being eleven (11) per cent of purchase price, as per terms of contract.

SLOAN SHIPYARDS CORPORATION,
(Signed) PHILIP D. SLOAN, *President*,
(Signed) J. O. PIERCE, *Treasurer*.

STATE OF WASHINGTON,
County of King, ss:

Subscribed and sworn to before me this 18th day of June, 1917.

[SEAL.] SETH HANFORD,
Notary Public in and for the State of Washington, residing it Seattle.

Mr. Sloan advised us that the above form of certificate was given to him at the home office, but, as this form was considered vague, and did not contain sufficient information as to the commitments made, this office drew up a form of affidavit, requiring that the details of all commitments for material or equipment, and payments made thereon by the contractor, be made a part thereof, and this was submitted to Mr. Sloan to be completed. He at first demurred to this new form, and refused to sign it, but called back the following day and stated he was now prepared to give the information required in that affidavit.

STATE OF WASHINGTON,
County of King, ss:

Philip D. Sloan, being first duly sworn, deposes and says:

1. That he is president of Sloane Shipyards Corporation, a corporation organized under the laws of the State of Washington, which corporation has entered into a contract, dated May 18, 1917, with the United States Shipping Board Emergency Fleet Corporation, for the construction of sixteen (16) wood cargo-carrying steamers; and

2. That on and up to the date of the making of this affidavit, said Sloan Shipyards Corporation has expended and actually paid the sum of $39,680 in the purchase of materials, equipment and supplies, to be used in the construction of the aforesaid sixteen (16) steamers, and for wages and salaries of employees in the construction of said steamers, as per details shown on Statement marked "Exhibit A," which is attached to and a part of this affidavit; and

3. That on the date of this affidavit, said Sloan Shipyards Corporation stands committed, through the medium of accepted orders, placed by it in good faith, or of properly executed contracts of purchase and sale, with established and competent vendors, for materials, supplies and equipment for use in the construction of the aforesaid sixteen (16) steamers, to expend and pay out the sum of $882,270, as per details shown on Statement marked "Exhibit B," which is attached to and a part of this affidavit, making its total purchases and commitments to date, for the account of the aforesaid contract, equal to the sum of $921, 950.

(Signed) PHILIP D. SLOAN.

Subscribed and sworn to before me this 20th day of June, 1917 A. D.

[SEAL.] FRANK I. CURTIS,
Notary Public in and for the State of Washington, resident at Seattle.

Immediately this was delivered to us, steps were taken to verify the commitments and payments shown thereon, and these being found correct, the check was duly paid over to Mr. Sloan.

When the second payment, as previously stated, became due—sixty (60) days after signing the contract—Mr. Sloan again called and made application for it. The requirements of the contract, as to the production of a sworn statement, for this payment are identical with those for the first payment, and we again submitted a like form of affidavit to him for completion. This was duly filled in and delivered to us on July 14, 1917. The commitments, and payments made, as shown thereon, were again verified by this office by telephone, as far as possible, and found correctly stated, and as this fully complied with the requirements of the contract, the check for the second payment was handed to Mr. Sloan.

An application for the third payment under the contract has since been made by the contractor, on account of the keel of one vessel (No. 39) having been laid, and half in frame, but the inspector at the plant has not yet certified that the work on the vessel has progressed to a point where this payment is due, and the matter is, therefore, being held in abeyance meantime.

REPORT.

This report covers the period from June 22, 1917—the date on which the first payment was received under the contract, from the United States Shipping Board Emergency Fleet Corporation—to August 31, 1917. No attempt has been made by the Contractor to segregate, in his books, receipts received from the Emergency Fleet Corporation, from those received from other sources, and it is, therefore, necessary to report on all receipts and disbursements to show the total cash transactions during the period examined.

The following is a summary of the moneys paid to the contractor for payments 1 and 2 above referred to, and disposition of these moneys by the contractor:

Summary of monies paid to contractor for payments one and two, and disposition made of same by contractor.

RECEIPTS FROM EMERGENCY FLEET CORPORATION.

First payment	$862,400.00	
Second payment	862,400.00	
		$1,724,800.00
Of which there has been disbursed directly for vessels for the Emergency Fleet Corporation for—		
Materials	67,133.14	
Labor on hull (estimated)	15,000.00	
Advance payments on commitments	412,527.40	
Advance payments on commitments prior to June 1, 1917	35,400.00	
		530,060.54
Balance		1,194,739.46
Deduct—		
Payments made on indirect items, said to be expended for vessels for Emergency Fleet Corporation		237,750.00
Balance		956,989.46
Deduct—		
Expenditure appropriated to purposes not connected with vessel construction for Emergency Fleet Corporation—		
Clinchfield Navigation Co.	317,548.00	
Other items—used for private account	191,775.13	
		509,323.13
Balance cash on hand at Aug. 31, 1917		447,666.33

"*Materials*" *and* "*Labor*."—The materials paid for consist chiefly of steel from Pacific Coast Steel Co., in addition to a small amount of lumber delivered from miscellaneous sources. The "Labor" is an estimated amount.

"*Advance payments on commitments*" (total, $447,927.40).—A full list of contracts entered into for material, etc., at August 31, is shown on schedule 3, along with the advance payments made on same, totaling the above amount.

"*Payments made on indirect items.*"—These are as follows:

Capital City Iron Works	$57,250
Anacortes Shipbuilding Co	120,500
Wisconsin Timber Co	60,000
Total	237,750

In addition to the above indirect payments, the following have been paid out by the contractor since August 31, 1917:

Capital City Iron Works	$10,000
Wisconsin Timber Co	20,000
Total	30,000

Capital City Iron Works.—This company was acquired by "P. D. Sloan, Trustee," in February, 1917, for the sum of $21,000, from J. Banford, an experienced foundryman. Since the above date, the Sloan Shipyards Corporation has invested the additional sum of $68,000 for new buildings, machinery, and general additions to the plant. It is intended that this company shall supply the shipyards with all castings required, and do all their machine work. It is under the active management of a friend of Mr. Sloan who, we are advised, is absolutely inexperienced in this line of business, and the inspector at the shipbuilding plant has already refused a consignment of materials from this foundry.

Anacortes Shipbuilding Co.—Mr. P. D. Sloan, president, states that his company does not control the Anacortes Co., although they have a substantial interest in it, and contracts for six of the vessels for the Emergency Fleet Corporation have been ublet by the Sloan Corporation to the Anacortes Shipbuilding Co.

This subletting contract provides that the Sloan Shipyards Corporation shall purchase all materials, etc., required for the building of the ships, and shall charge the "usual commission" for this service.

The plant is under the management of Joseph Sloan, brother of P. D. Sloan.

The sum of $120,500 has been advanced for plant construction by the Sloan Shipyards Corporation.

Wisconsin Timber Co.—A contract has been entered into with this company, a copy of which is attached herewith and shown as Exhibit 1, by which the Shipyards Corporation agrees to advance the sum of $100,000 and to take as security $100,000 of a new bond issue of $150,000. These bonds are a second lien on all the property of the Timber Company, there being an old outstanding issue of $50,000, which is a prior lien. Of the new issue, it is intended that $50,000 shall be used to retire the old issue if this amount of the new issue can be sold, the remaining $100,000 being held, as aforesaid, by the Sloan Shipyards Corporation.

In consideration of this advance, the Timber Company agrees to furnish ten million (10,000,000) feet of lumber at thirty ($30) dollars per thousand feet, and to give the Sloan Corporation an option to purchase the entire output in addition to this 10,000,000 feet, at prevailing market prices.

In addition to this, however, the Sloan Shipyards Corporation agrees to pay for all lumber as received up to the sum of $250,000. The above contract is dated July 6, 1917, but at the date of our visit an almost negligible quantity of lumber had been delivered.

Since August 31, a payment of $20,000 has been made to the Premier Engine Works, Portland, Oreg. This payment appears to be the first of a number of such as have been made to the Capital City Iron Works, and the Wisconsin Timber Co. No contract was on file, but Mr. Sloan stated this company would build engines for the Shipyards Corporation, and that they will appoint their own representative as secretary-treasurer to look after the shipyards' interests.

A contract had previously been entered into with Allis-Chalmers Manufacturing Co., Milwaukee, for certain engines for the vessels for the Emergency Fleet Corporation, but this contract has been canceled, and a refund of the advance payment requested. It is intended to place this canceled order with the Premier Engine Works, and it is presumed that the above-mentioned $20,000 is an intitial payment thereon.

Proportion of payments appropriated for purposes other than the construction of vessels for Emergency Fleet Corporation (Schedule 1).

Clinchfield Navigation Co.	$317,548.00
Other items—used for private account	191,775.13
Total	509,323.13

Clinchfield Navigation Co.—Payments amounting to $317,548 have been made to this company, out of moneys advanced by the Emergency Fleet Corporation. Mr. Sloan stated that of this amount $254,000 is in payment of advances previously made by the Clinchfield Navigation Co., and the balance, $63,548, is commission for the securing of contracts for the Sloan Shipyards Corporation. It is understood that the Clinchfield Navigation Co. will be paid further proportions of commission out of every payment made by the Emergency Fleet Corporation, but whether or not they were instrumental in securing the above contract for 16 steamers is not known, but it appears that a commission is paid on all the work received by the Sloan Shipyards Corporation to date.

On June 1 the Clinchfield Navigation Co. had a credit on the Sloan Shipyards Corporation books amounting to approximately $300,000. This amount appears to be an advance payment made by them on the contract for four motor ships now being built for private account.

The name of the vice president of this company is Charles N. Barnett, but the names of the other officers could not be obtained. It is suggested that, as their home office is in New York, further information might be obtained regarding them through our district officer there.

The balance, of $191,775.13, has been expended by the contractor for various items for private account, and we were unable to obtain details of the disposition of this amount.

GENERAL.

The balance due to the Sloan Shipyards Corporation on the motor ships now being erected at the plant is approximately $1,100,000, 20 per cent of which will be paid out in various sundry commissions. Whether the balance will be sufficient to complete these ships can not be positively stated, but, from information received at the plant, we are inclined to doubt it.

The management of the corporation appears to be most inefficient, and, while the system of financing small companies may be perfectly honorable, it is, to say the least, a very roundabout way to obtain materials much needed for the Emergency Fleet Corporation vessels under contract.

Summary of cash receipts and disbursements (Schedule No. 2).—Attached herewith (Schedule No. 2) is a summary of all cash receipts and disbursements as shown on the books of the Sloan Shipyards Corporation from June 1 to August 31, 1917, inclusive.

Commitments under completed contracts for materials (Schedule No. 3).—A detailed list of all commitments under completed contracts entered into by the contractor, along with advance payments made thereon, is shown on Schedule No. 3 herewith.

Yours, very truly,

JOHN PURSE,
District Auditor.

SEATTLE, WASH., *November 22, 1917.*

UNITED STATES SHIPPING BOARD, EMERGENCY FLEET CORPORATION.

DEAR SIRS: The following report on the Sloan Shipyards Corporation is supplementary to the report made by me dated September 14, 1917, after an examination of the books and records for the period ending August 31, 1917. This further report was made for the purpose of obtaining information as to the disposition of the balance of payments A and B, totaling $1,724,800, received from the Emergency Fleet Corporation in terms of the contract entered into with Sloan Shipyards Corporation on the 18th day of May, 1917, for the construction of 16 wooden cargo-carrying ships.

The balance of the moneys on hand at August 31, 1917, received from the Emergency Fleet Corporation, as before mentioned, was		$447,190.63
From September 1, 1917, to October 31, 1917, inclusive, the disbursements made by the Sloan Shipyards Corporation on account of Emergency Fleet Corporation ships were as follows:		
Materials	$98,218.04	
Labor (estimated)	6,891.48	
Advance payments on contract	17,183.92	
		122,293.44
		324,897.19
Advances to companies in which the Sloan Corporation is interested:		
Capital City Iron Works	52,202.18	
Anacortes Shipbuilding Co	105,000.00	
Wisconsin Timber Co	40,000.00	
		197,202.18
		127,695.01
Deduct proportion of payments appropriated to private purposes		84,203.15
Leaving a balance on hand October 31, 1917, of		43,491.86
From Nov. 1 to 16, 1917, further disbursements to the amount of		37,521.17
have been made, as detailed below, for materials, labor, etc., for both the Emergency Fleet Corporation ships and those for private account.		
Leaving a net balance in the bank Nov. 16, 1917, of		5,970.69

Details of disbursements for materials, labor, etc., from Nov. 1 to 16, 1917 (above referred to).

For Emergency Fleet Corporation ships:		
Material	$2,689.33	
Labor	3,316.67	
		$6,006.00
For private ships:		
Material	5,224.27	
Labor	12,390.66	
		17,614.93
Capital City Iron Works: Additional advance		5,000.00
Plant construction		6,587.58
Sundry expenses		2,312.66
Total		37,521.17

The company has been borrowing certain sums from the Capital National Bank, Olympia, Wash., and, under the date of our examination, the amount of such advances totaled $30,000, and the next payment due on the ships being built for private parties has been assigned to the bank as security.

GENERAL.

Detailed information was given on the following matters in the previous report, and this may be considered merely as supplementary to what was stated therein:

Clinchfield Navigation Co.—This company has been paid directly from funds advanced to Sloan Shipyards Corporation by the Emergency Fleet Corporation, the sum of $317,548. According to the books of the Shipyards Corporation, $154,000 was in repayment of advances made on account of contract and $163,548 on account of commission.

No documentary evidence of any kind was on file, but from information gathered it appears that the Clinchfield Navigation Co. originally contracted with Sloan Shipyards Corporation for 4 Ferris type vessels for $385,000 each, which they later sold to the Emergency Fleet Corporation for $490,000 each, making a profit of $420,000 on the transaction. These vessels, it is stated, are 4 of the 16 for which Sloan Shipyards Corporation has contracts with the Emergency Fleet Corporation.

It is further stated that the Clinchfield Navigation Co. was instrumental in securing for Sloan Shipyards Corporation the contract for 12 additional Ferris type vessels, for which service they are to receive a commission of 5½ per cent of the contract price,

or $323,400. This, together with the profit above mentioned, makes a total of $743,400 which is payable out of the funds received from Emergency Fleet Corporation and of which, according to the Shipyards Corporation's books, $163,548 has been paid, leaving a balance of $579,852, which Mr. Sloan previously stated would be paid in installments as progress payments were received from Emergency Fleet Corporation.

Private accounts.—Four vessels are now building for private account, the purchase price being $2,000,000. The sum of $1,125,000 has already been received on this contract, leaving a balance still unpaid of $875,000, with which to complete the construction of these ships and make certain large payments for which the Sloan Corporation stands committed. The following statement shows in detail how this balance is distributable:

Balance unpaid on contract		$875,000.00
Payable to Clinchfield Navigation Co.:		
Commission	$295,333.40	
R. M. Calkins	52,187.50	
Assigned to Capital National Bank	30,000.00	
		377,520.90
		497,479.10
To be placed in escrow, pending completion of contract		131,250.00
Balance available for completion of vessels		366,229.10

It is not considered that this sum will be nearly enough to complete these vessels.

Advance payments on contracts: The amount of advance payments made on contracts for materials to be incorporated into the Emergency Fleet Corporation ships, Aug. 31, 1917, and as shown on the previous report, was		$447,927.40
From Sept. 1 to Oct. 31, 1917, inclusive, additional advances have been made, totaling	$48,533.92	
Less returned from Allis-Chalmers Manufacturing Co.	31,350.00	
		17,183.92
Making an aggregate of advance payments for materials, etc., for Emergency Fleet Corporation ships		465,111.32

These additional advances on contracts, as mentioned above, are as follows:

Tregoning Boat Co	$11,278.40
Hesse-Martin Iron Works	1,218.00
Pacific Machine Shop & Manufacturing Co	3,804.00
Doud, McFarlane Machinery Co	4,343.52
Kerr Machinery & Supply Co	7,890.00
Premier Engine Works	20,000.00
	48,533.92
Deduct:	
Payment returned from Allis-Chalmers Manufacturing Co	31,350.00
	17,183.92

On schedules A and B are given details of the payments received from the Emergency Fleet Corporation, and the disposition of same; also a summary of cash receipts and disbursements from June 1, 1917, to October 31, 1917. Schedule C is a copy of the balance sheet, as of October 31, 1917.

Attached hereto are reports on the following companies in which Sloan Shipyards Corporation is interested: Anacortes Shipbuilding Co., Capital City Iron Works, Wisconsin Timber Co.

Yours, very truly,

JOHN PURSE, *District Auditor.*

Senator BANKHEAD. Admiral, I believe you have a contract with H. L. Shattuck & Co., of Portsmouth, N. H., haven't you?

Admiral BOWLES. Yes.

Senator BANKHEAD. Will you kindly tell us about that contract, when it was entered into, the amount of it, the facilities this company

had for doing the work when the contract was made, and the amount that has been advanced?

Admiral BOWLES. The contract to which you refer was executed on the 26th day of July, 1917, and at the time was executed by the J. H. Mendell Engineering & Construction Co., of Manchester, N. H. It states that the contractor has possession of a site for a shipyard near Portsmouth, N. H., on the Piscataqua River, part of which it owns and part of which it holds under lease for five years. The contractor agrees to prepare the said site with 18 shipways, together with the necessary grading, dredging, offices, stores, etc., and provide the necessary equipment and tools.

The owner agrees to pay the contractor the actual cost of the shipbuilding yards, without any profit, up to $360,000, and will assume the payment of the rent. The contractor agrees to build 18 hulls of the Ferris type and to deliver them afloat at the works of the contractor, Portsmouth, N. H.; the first 3 hulls to be delivered on or before April 16, 1918; 7 on or before May 15, 1918; 6 on or before May 30, 1918; and 2 on or before August 15, 1918.

This contract was made on this basis: The owner is to pay the contractor the actual cost of the vessels; and if, exclusive of the allowance for salaries, the cost is more than $280,000 but less than $290,000, then the owner will pay the fixed price of $290,000 per hull. If the actual cost is more than $290,000, then the owner will pay such actual cost. In case the actual cost is less than $280,000, then the owner will pay for each hull such actual cost plus the sum of $10,000 as profit to the contractor, and an additional profit equal to one-half the amount by which such actual cost of each hull is less than $280,000.

Senator BANKHEAD. What do you mean exactly by the "owner" paying?

Admiral BOWLES. I mean the Fleet Corporation. I was using the words of the contract.

Senator BANKHEAD. I supposed that was what you meant. Now, will you state to the committee whether or not that yard has been completed, and if not, what per cent of it has been completed.

Admiral BOWLES. On December 1, the buildings were 100 per cent complete, and practically all machinery received and installation nearing completion. There were three slipways completed, and nine were over 90 per cent completed.

Senator BANKHEAD. That was the 1st of December?

Admiral BOWLES. Yes. The cableways, piling, and timberwork were progressing satisfactorily. Due to the nonarrival of ship timber, nearly all work had been done on the yard, and the yard management was reported good, and they have been notified it will be necessary to build only 12 ways instead of 18. But the per cent of work done under the contract on December 1 was nothing.

Senator NELSON. That is, on the shipbuilding?

Admiral BOWLES. On the ships.

Senator NELSON. Admiral, these were wooden ships, were they not?

Admiral BOWLES. Wooden ships.

Senator NELSON. There was no shipbuilding timber available in that section of the country, was there?

Admiral BOWLES. Only a very trifling amount.

Senator NELSON. It all had to be imported from the Pacific coast or the Gulf coast?

Admiral BOWLES. Yes.

Senator NELSON. Would it not have been more reasonable to establish such a yard either on the Gulf coast near where the timber is, or on the Pacific coast near where the timber is?

Admiral BOWLES. The only possible reason for giving any contracts in New England for these vessels was the fact that there was some labor there that had been doing this kind of work for many years, and that would not move.

Senator NELSON. That is the only excuse?

Admiral BOWLES. That is the only excuse.

Senator NELSON. Otherwise the timber would cost more there than if the yards had been established on the west coast or the south coast?

Admiral BOWLES. The timber will cost more there by the cost of freight, which would amount to anywhere from $12 to $20 a thousand.

Senator NELSON. And that sacrifice was made just simply because it was felt that there was more labor available for shipbuilding there than farther south or west?

Admiral BOWLES. I do not know that even those things were taken into consideration, Senator, in these earlier contracts.

The CHAIRMAN. What is the amount of advancement made to this company?

Admiral BOWLES. Nothing.

The CHAIRMAN. Absolutely nothing by the Government?

Admiral BOWLES. They have had money advanced to them under this arrangement to advance money for the ship yards.

The CHAIRMAN. Yes. How much?

Admiral BOWLES. That was to be $360,000.

Senator NELSON. And that has all been advanced, has it not?

Admiral BOWLES. I presume so but I have not the record here.

Senator BANKHEAD. Admiral, has there not been an amount advanced, or agreed to be advanced to this company for the purpose of building their yard, since the first of January?

Admiral BOWLES. I do not know that.

The CHAIRMAN. Since yesterday?

Senator BANKHEAD. I mean, since the last day of December, perhaps?

Admiral BOWLES. I have no knowledge of that, Senator, and would not have, because the wooden ships are no longer under my control and have not been for some three or four weeks—three weeks I should judge. They are now under the management of the division of wooden-ship building.

Senator NELSON. Who is the head of that?

Admiral BOWLES. Mr. Heyworth is in charge.

Senator NELSON. How long has he been in charge of that division?

Admiral BOWLES. Since December 11th.

Senator NELSON. And who preceded him in that?

Admiral BOWLES. I did.

Senator NELSON. You had the whole thing?

Admiral BOWLES. I had all the vessels under contract prior to December 11. I had simply to take charge of all questions arising under the contracts after they were executed. I had nothing to do with the making of them.

Senator BANKHEAD. I understood you to say that the yard was completed, practically?

Admiral BOWLES. The yard is not completed, but it is very well advanced.

Senator BANKHEAD. I misunderstood you then.

Admiral BOWLES. The buildings are 100 per cent completed.

Senator BANKHEAD. What do you mean by the "buildings" if you do not mean the yard?

Admiral BOWLES. You see the yard includes the slipways and the cableways, and the piling and blocking, which is a very considerable part of the yard, I should say fully a half of it; and that outside work, I should think, from what I have in the way of a report, is about 50 per cent finished. So I should say the yard was in a condition to do work, but from 75 to 80 per cent finished.

Senator BANKHEAD. Then you are under contract to advance them money for that yard if it is necessary, for them to build it?

Admiral BOWLES. Yes.

Senator BANKHEAD. And you also advance the money for the building of the ships and the pay of labor if they require it?

Admiral BOWLES. Those payments are prescribed in the contract, how they are to be made; and I find that they have, as I reported before, an impressed fund; that is, they probably have this $360,000 with permission to pay it for the things for the shipyard as bills come in. This contract says that the contractor shall submit to the owner every seven days, bills covering the actual cost as before defined, and settlement shall be made within three days for such actual cost; so that the bills for the construction of the vessels are paid weekly.

Senator BANKHEAD. Now, Admiral, state as nearly as you can remember, the total amount of cash that has been advanced to these companies.

Admiral BOWLES. I have no idea whatever, Senator, but I can find out for you. I have a statement here which is up to November 30, made by the Auditor, and that shows that at that time they had spent $192,399.79. That is November 30.

The CHAIRMAN. They have not laid a keel yet?

Admiral BOWLES. No, sir.

Senator BANKHEAD. They are under contract to deliver how many vessels in March?

Admiral BOWLES. They have one keel laid. They were under contract to deliver three vessels, I think it was, in May.

Senator BANKHEAD. I thought you said the first would be delivered in March? I am not sure about that.

The CHAIRMAN. I think all of them were to be delivered in May, except two, which were to be delivered on or before August 1.

Admiral BOWLES. Seven on or before May 15—three April 16; seven May 15; and six May 30.

Senator NELSON. Is it not evident from the fact that that yard is not completed, that they can not complete them within the time?

Admiral BOWLES. They will probably allege, and properly, that they are delayed in the delivery of the first vessels, by reason of the nonreceipt of material. They have plenty of plant there to build the first three vessels, to be delivered in April, if they had had the material as they might reasonably have expected.

Senator NELSON. You mean the lumber?

Admiral BOWLES. Yes.

Senator NELSON. And do you know why they have been unable to get the lumber?

Admiral BOWLES. My impression is that they relied upon the Fleet Corporation's order for the lumber, and I think they have been active in chasing up these orders themselves, but have been unable to get it.

The CHAIRMAN. On account of a lack of transportation, or something else?

Admiral BOWLES. It is due principally to the fact that the southern pine dealers undertook to do the impossible, as I explained to you before. They undertook to make deliveries of lumber of a kind and quality which it was impossible for them to produce within the time they promised.

Senator BANKHEAD. Just on that point, Admiral, is it or is it not a fact that the specifications as to southern pine were changed after their first agreement to furnish this lumber?

Admiral BOWLES. Yes, but the principal changes were in their favor.

Senator BANKHEAD. Would not the changes that were made make it more difficult for them to secure the timber?

Admiral BOWLES. Some of them did and some of them did not. But I want you to understand, Senator, that in my remarks, I am not casting blame on the southern pine people.

Senator BANKHEAD. I understand that.

Admiral BOWLES. I think they undertook the impossible.

Senator BANKHEAD. You do not think, then, they could have met their obligations according to the first specifications that were submitted to them on which they made their bids?

Admiral BOWLES. I do not.

Senator BANKHEAD. Then they are in a measure to blame, I presume. But if the difficulty arose from a change of specifications, which made it more difficult, then perhaps the responsibility might be shifted.

Admiral BOWLES. People are very apt to make use of that word "change" as an excuse, and I think it is being frequently used here without justification.

Senator BANKHEAD. Oh, I expect that is true. You understand, I am not criticising the action of the board.

Admiral BOWLES. No, sir; but I, on the other hand, am trying to explain. You will understand, these vessels were designed in haste. The timber schedule was gotten out by the designers as a matter of convenience to the contractors. The designers did not contemplate that the schedule would contain all the lumber that would be necessary to build the ships. Most of the shipbuilders who undertook to build the ships thought it did, but from time to time after they began to get into it they found it did not. The more intelligent ones found it out sooner, and they began to make changes in their orders. And, every man seeking to get ahead of everybody else, they frequently pursued these changes in a way that caused confusion; that is, instead of doing it always through the Fleet Corporation, they frequently went to the mills themselves, and the consequence was there was more or less confusion about these necessary and proper changes in the schedules. There were many changes made in the schedules because the lumber mon themselves thought if we would reduce this length or reduce that width, or use a different

length of frame, they could get it out so much easier and so much quicker. There were a great many changes made of that character.

Then later there came along the changes which were necessary in the design of the floors of the ships; that caused a delay because it was an addition. Then there was the change that I made in the quality of the lumber. That, in itself was not a delay essentially, because the mills had been taking advantage of the opportunity of supplying smaller dimensioned material first. That is, they supplied first the decking and planking, and things that were required last. Then when I made changes which improved the quality of those things, of course they were harder to get and it stopped them from supplying those things which were not wanted.

The CHAIRMAN. Was there not an increase in the width of some of the timber ordered in the original specifications?

Admiral BOWLES. Yes; there was an increase in just one set of pieces, and that was in the flitches necessary to make the bilge flooring on the frame. You can see that increasing the depth of the floor increased the depth of the frame where it joined it, and those widths were increased.

The CHAIRMAN. As a matter of fact, Admiral, originally, when the Southern Pine Association was called on to say what it could do, it was contemplated that the number of wooden ships would be about 100, was it not, and subsequently that number was increased to something like 300?

Admiral BOWLES. I imagine that is true, but I do not know those facts. It was before my time, and I have no record of it.

Senator BANKHEAD. Admiral, what is the longest and largest-square lumber used in the building of these wooden ships?

Admiral BOWLES. I think the keel bosses; they are 14 by 14 inches and 40 feet long.

Senator BANKHEAD. Nothing larger that 14 by 14?

Admiral BOWLES. No.

Senator BANKHEAD. That is the largest piece of lumber used in any of these wooden ships?

Admiral BOWLES. Yes.

Senator JONES. Do you mean that is the largest they put in any ships on the Pacific coast?

Admiral BOWLES. No; on the Pacific coast there are considerably larger pieces. I will correct that testimony by saying that there are a few pieces that are larger. There is the rudder blade, 16 by 18, and there a few pieces 16 by 24.

Senator BANKHEAD. You mean a few pieces in each ship?

Admiral BOWLES. In each ship. There are two pieces, for instance 16 by 24 inches, 40 feet long. There is one piece 16 by 20. These are in the framing at the stem.

Senator JONES. You are referring now to ships built on the Atlantic coast?

Admiral BOWLES. I am referring to the Ferris design. Of course the Ferris design on the Pacific coast was for the use of fir, and no changes have ever been made in it.

Senator BANKHEAD. The dimensions, I suppose, are the same?

Admiral BOWLES. The dimensions of individual pieces are considerably larger in the fir ships.

The CHAIRMAN. Don't you have some pieces as much as 34 inches wide?

Admiral BOWLES. There are a few flitch timbers that are 12 by 34, Senator. There are seven of those. They are 7 feet long, and there are two in each boat. Then follows a list; 12 by 32, 8 feet long; 12 by 32, 9 feet long; 12 by 32, 6 feet long; 12 by 30, 7 feet long; 12 by 30, 8 feet long. We seem to be getting them now from cypress butts.

The CHAIRMAN. Is there any other question to be asked Admiral Bowles before we go on?

Senator NELSON. I should like if you would furnish us detailed information as to the operations under those two contracts that Senator Jones referred to on the Pacific coast, contracts where the Government advanced money for building the yards. I would like to know what has been done under those contracts, and the amount of advances, similar to what you gave us about these other matters.

Admiral BOWLES. Very good, sir.

Mr. Chairman, I have a great lot of photographs here showing actual construction going on, and some photographs showing the conditions of these fabricating yards as of December 15. If you would like to have me show them, I can put them on the table here.

The CHAIRMAN. I think you might just lay them on the table, Admiral, and we will take care of them and give them back to you.

That is all then, Admiral, I believe. We will excuse you, sir, and we are very much obliged to you.

Admiral BOWLES. I hope it is proper for me to say, Mr. Chairman, that it would be a great help to us to get immediate action on these bills.

The CHAIRMAN. We will study those and see what we can do.

Senator JONES. I want to ask the admiral another question, Mr. Chairman. With reference to this Sloan matter, I should like to know whether Mr. Ferris, the naval constructor of the Emergency Fleet Corporation, interested himself in connection with that matter?

Admiral BOWLES. The record shows that Mr. Ferris gave Mr. Charles Barnett, the vice president of the Clinchfield Navigation Co. a letter of introduction to Gen. Goethals.

Senator JONES. Was the Clinchfield Co. a client of Mr. Ferris? Does the record show that?

Admiral BOWLES. I think he stated they were clients of his, and the record shows it.

Senator HARDING. Admiral, whose name should a Senator give when he has numerous applications by correspondents for work in shipbuilding?

Admiral BOWLES. That is people who want to get work in shipyards?

Senator HARDING. Yes. Our office, evidently due to some intimation in this hearing that there is a shortage of labor, has a great many inquiries as to whom to apply to for shipyard labor, I might say parenthetically, probably thinking of the exemption that goes with it. I would like to be of service and refer them to the right people.

Admiral BOWLES. I think if you would refer them all to our Mr. Myer Bloomfield, of the Industrial Service Department of the Fleet Corporation, he will put them in the way to apply at the proper places.

The CHAIRMAN. We are very much obliged to you, Admiral. We will now hear Mr. Radford.

STATEMENT OF MR. GEORGE S. RADFORD, MANAGER OF THE CONTRACT DIVISION, UNITED STATES SHIPPING BOARD, EMERGENCY FLEET CORPORATION.

The CHAIRMAN. Please state your name, age, and place of residence.

Mr. RADFORD. My name is George S. Radford; residence, Washington, D. C.; age, 36.

The CHAIRMAN. What is your occupation now, Mr. Radford?

Mr. RADFORD. I am manager of the contract division of the Emergency Fleet Corporation at the present time.

The CHAIRMAN. How long have you been such manager?

Mr. RADFORD. I reported on the 19th of September, and did not assume actual charge of the division until about three or four weeks later.

The CHAIRMAN. What were you engaged in before that?

Mr. RADFORD. I was on the staff of one of the large munition manufacturing concerns.

The CHAIRMAN. At what place?

Mr. RADFORD. With offices in Bridgeport, Conn., and New York City.

The CHAIRMAN. You say "on the staff." What are we to understand by that?

Mr. RADFORD. I mean to say the engineering and technical staff.

The CHAIRMAN. Were you interested in it in any way?

Mr. RADFORD. In the company?

The CHAIRMAN. Yes.

Mr. RADFORD. No, sir.

Senator NELSON. Are you an engineer by profession?

Mr. RADFORD. Yes, sir.

Senator NELSON. What has been your experience as an engineer?

Mr. RADFORD. I am a graduate of the Naval Academy; also of the Massachusetts Institute of Technology, where I took the special course for naval constructors. I was an officer in the Corps of Naval Constructors until March 29, 1915, when I resigned to go into civil life. During that time, I might say as a matter of interest, I looked out for contracts and such matters in the Bureau of Construction and Repair in the Navy Department for about four and a half years.

Senator NELSON. You were then an officer of the Navy?

Mr. RADFORD. Yes, sir; which was the occasion, I assume, of my being called to this work in the Fleet Corporation.

The CHAIRMAN. Have you gone back into the service of the Navy?

Mr. RADFORD. No, sir.

The CHAIRMAN. What was your experience, did you say, in the matter of the construction of ships?

Mr. RADFORD. Well, I was a naval constructor in the Navy, from July 28, 1903, until March 29, 1915, about twelve years.

The CHAIRMAN. Did you ever have any experience in the building of wooden ships?

Mr. RADFORD. No, sir; only to observe the construction of ordinary barges. I know very little about wooden ship construction.

The CHAIRMAN. What are your duties, Mr. Radford?

Mr. RADFORD. As manager of the contract division—which, by the way, is a very small organization—it has been my duty to act as

a sort of intermediary between shipbuilders and the Fleet Corporation. When people come to the Fleet Corporation with offers to build ships they are usually turned over to me, and I confer with them and get their proposal into shape, so that in as brief a time as possible the matter may be placed before the general management of the Fleet Corporation with a recommendation which will enable them to say "yes" or "no" to the proposition. I do not, as you might possibly infer from the title, "contract manager," actually pass on the contracts. I merely collect the data from the various divisions which are concerned—from the financial division as regards the financial standing of the contractor; from the district officer, if it is the case of a new shipyard, involving investigation of a shipbuilding site; from the Construction Division, if it is a going shipyard, to determine whether the condition of the work going on in the yard warrants entering into further contracts or not. When that data is assembled, it is placed before the general management with a recommendation.

Senator NELSON. Since you have come into office, have you been confronted with a good many applications for the building of wooden ships?

Mr. RADFORD. Yes, sir.

Senator NELSON. They are coming in constantly?

Mr. RADFORD. Yes, sir; for all kinds of ships under all sorts of conditions.

Senator NELSON. You pass on the wooden ships?

Mr. RADFORD. On both of them.

Senator NELSON. That is, you prepare the data for the management of the Fleet Corporation?

Mr. RADFORD. Yes, sir.

The CHAIRMAN. That has reference to steel ships as well as wooden?

Mr. RADFORD. Both.

The CHAIRMAN. Your duties are not cofined entirely to the wooden ships?

Mr. RADFORD. Not to any one class of ships. The work of the division is gradually growing into substantially this: The contract division will have a section devoting its time to the program for future construction that will, as I see it, be well informed as to the available resources of the country as represented by what actually exists and by what is potential, judging from the applications that come in from people who have not shipyards. Then it will take up next the actual placing of contracts, and its work will cease when the contracts have been actually executed and turned over to one of the construction divisions to be carried through.

Senator NELSON. Do you have any difficulty in finding time to see these people who come with the idea of offering to build ships?

Mr. RADFORD. I have had a very severe load to carry during the last two months, as probably everybody is aware, but I am trying to solve that now, and with every expectation of being able to do so, by getting in a number of men who can gradually be trained into taking these people into separate rooms and discussing at length their propositions so that they can go away feeling as though they have had a thorough understanding with us as to just what their proposition involves. I want to do that even in case we can not accept their proposals.

The CHAIRMAN. Are those propositions still coming in in considerable quantities?

Mr. RADFORD. Yes, sir; there seems to be no end to them.

The CHAIRMAN. And then the first step for one who offers to build a wooden ship is to see you and make a statement to you of what he proposes to do?

Mr. RADFORD. Not necessarily, Mr. Chairman. Very often those people will see the general manager first and be referred to me later. In order to facilitate that situation I have gotten out a circular letter, which was really put out during the time Admiral Capps was general manager, having in mind the assisting of people to put their proposition in such complete shape that we would not have to ask any questions or go into any very great detail in conference to develop what their proposition involved. I have a copy of that circular letter, if you would be interested in seeing it.

The CHAIRMAN. Yes; I think it would be well for you to offer something like that to go into the record.

(The letter submitted by Mr. Radford is here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, November 13, 1917.

[Circular Letter No. 50. (Supersedes Circular Letter No. 16 dated Aug. 30, 1917).]

INFORMATION FOR PERSONS SUBMITTING PROPOSALS FOR COMPLETE VESSELS TO THE UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

General.—The following information is provided with a view to swift action in the case of new proposals submitted to the Emergency Fleet Corporation, so that a definite "yes" or "no" answer can be given as soon as practicable.

Proposals should be submitted in writing, in duplicate, being addressed to the—

United States Shipping Board Emergency Fleet Corporation,
(Attention Manager Contract Division),
1319 F Street NW.,
Washington, D. C.

It has been found expedient to give *no assurances of the action to be taken in advance of the receipt of a complete and definite proposition*, setting forth all of the facts and circumstances involved. A preliminary conference with the contract manager to discuss the form in which the proposal should be prepared in order to insure completeness may be arranged by appointment if desired.

When such a complete proposal is received, any additional information required to enable the general manager of the Emergency Fleet Corporation to act upon the proposition may be obtained by written request or in conference with the contract manager by appointment.

Proposals will be considered in due course on the merits of the individual case, and with reference to their relative desirability in comparison with other propositions before the corporation or in prospect at the time. Other things being equal, the desirability of the proposal will be affected principally by the time of delivery of the vessels, the cost, and the dead-weight carrying capacity.

Detailed information required.—The proposal should set forth clearly and explicitly the exact nature of the proposal as to—

(*a*) Number of vessels.
(*b*) Type, size, and speed of vessel.
(*c*) Time of delivery.
(*d*) Location of plant.
(*e*) Brief description of plant facilities installed and contemplated.
(*f*) Source of labor supply and arrangements for housing such labor.
(*g*) Character (with special reference to shipbuilding experience) of supervisory force and how to be obtained.
(*h*) Lump-sum price of vessels.
(*i*) Additional information as called for below.

Financial statement.—The proposal is to be accompanied by a sworn statement showing the assets and liabilities of the company. References to known banks or other financial institutions should be included from which the business standing of the applicant can be ascertained, together with a specific statement as to the credit that these banks are prepared to advance and the amount of liquid capital that will be available for carrying on the contract if entered into.

Plans and specifications.—The proposal should be accompanied by general plans and specifications of the vessels and machinery, and complete detailed specifications of both, all in quadruplicate.

Structural material.—The corporation ordinarily protects against loss arising from increase in the cost of structural steel material as indicated in the tentative form of contract. Schedule "B" referred to therein should be made out and the estimated price of steel computed. The present prices on which protection is based are plates 3¼ cents per pound; shapes, 3 cents per pound; and rounds, flats and bars, 2.9 cents per pound—all base prices f. o. b. mill.

Limited labor protection.—The tentative form of contract contains a clause providing for limited labor protection. The proposal should be based preferably on no labor protection. If the limited labor protection is desired the proposal should contain a statemeut as to what deduction in the lump-sum price named should be made for the inclusion of such limited labor protection. If the proposal is accepted on the basis of limited labor protection, the protection in question will be based upon the prevailing rate of wages in the immediate vicinity for similar work. Ordinarily it will be based on the maximum wage schedule of the nearest navy yard.

Machinery.—If the proposal is favorably considered the Emergency Fleet Corporation may reserve to itself the right to purchase on its own account and supply to the contractors, machinery, boilers, and auxiliaries. Therefore, the proposal should show the estimated cost of the following items, together with the names of the firms with whom the firm submitting the proposal have arranged options.:

PROPELLING MACHINERY.

Reciprocating engines or turbines.
Boilers (type).
Shafting, thrust bearing and wheels.
Pumps.
Pumps, centrifugal.
Evaporator and feed heaters.
Lubricating oil filter and pump.
Fuel oil system.
Main condenser.
Auxiliary condenser.
Stern tube.
Stack, breeching, and all steam piping and material.
F. o. b. contractor's works.

HULL MACHINERY.

Windlass.
Gypseys or capstans.
Single winches.
Double winches.
Hand pumps.
Steering gear and hand and telemotor.
Refrigerating machines.
Generating sets.

Special for new shipyards.—In general the corporation is not disposed to encourage the creation of additional shipbuilding plants unless it is quite clear that the parties interested are experienced in shipbuilding; that they are able to finance the undertaking; that arrangements have been made for the necessary plant facilities and propelling machinery and auxiliaries; that a source of labor supply can be utilized that will not adversely affect existing shipyards, and that suitable housing arrangements for such labor are available near the site of the plant. Accordingly the above-named subjects should be discussed in detail in the proposal. Further information is required as follows and should be thoroughly covered:

(*a*) Plans showing plant site, from which its suitability as to depth of water, character of land, terminal transportation, and housing facilities can be determined.

(*b*) General plan of plant layout.

(*c*) Full information as to the source or sources from which labor is to be drawn, including the names of the practical shipbuilders who will be connected with the work in a supervisory capacity.

(*d*) Summary of estimated cost of improvements and additions; actual cash available for same, and proposed method in detail of financing the plant.

(*e*) Time required to build the plant.

Form of contract.—A tentative form of contract has been prepared for the information of persons submitting proposals. As noted thereon, the proposal should be accompanied by a statement to the effect that if the proposal is accepted, the bidder is prepared to enter into a contract in accordance with the draft of contract in question, as modified to suit the circumstances of the particular case; the modifications proposed by the bidder to be described in detail in an appendix to his proposal, setting forth the necessary changes in language by paragraphs of the form of contract.

Bidders are advised that a reasonable amount of time is required to analyze proposals and to conduct the necessary investigations of the plant, financial standing of the bidder, etc., before a decision can be reached as to whether the proposal is to be accepted or not; and that the length of time required to reach a decision will depend very largely on the thoroughness with which the proposal has been prepared in the first place.

(Signed) G. S. RADFORD,
Manager Contract Division.

Approved.

W. L. CAPPS, *General Manager.*

The CHAIRMAN. After that you would take up the question of their standing, their financial responsibility, the equipment they have, the plant, if any, and determine whether or not it is advisable to enter into a contract with them, and make your recommendations to the general management?

Mr. RADFORD. That is precisely right, Mr. Chairman. I cut out everything in the way of investigation that is not necessary.

Senator NELSON. Do you give any consideration to accessibility or the ease with which material can be secured or labor secured?

Mr. RADFORD. Yes, sir.

The CHAIRMAN. You might state what elements enter into this investigation of yours, the material or substantial ones, at least.

Mr. RADFORD. Yes, sir. I might say, as a matter of interest, that all of those things are set forth in this letter in detail, just what we require people to put in.

Senator NELSON. Do you include the matters of material and labor too?

Mr. RADFORD. Yes, sir. Of course, the material is provided in large part by the Fleet Corporation, or through its offices.

Senator NELSON. You provide the material, do you?

Mr. RADFORD. In a way. That is, we see that the material is available. We use our offices to assist in every way possible in providing both steel and lumber. That is handled by the general purchasing officer. You will notice our contracts contain a clause to that effect. We rest very heavily on the opinion of the district officer in the matter of the advisability of starting additional construction in his district; that is, from the standpoint of labor supply.

Senator NELSON. Are you now engaged in, or do you continue to give contracts in which the Government finances the building of the shipyard, where there is no shipyard in existence?

Mr. RADFORD. There has been no such contract let since I have been in office, to my knowledge.

Senator NELSON. None like these old-time contracts that we have referred to?

Mr. RADFORD. No, sir; there have not been any cost-plus contracts either; that is, cost plus 10 per cent. We favor the straight lump-sum form of contract. When we can not agree as to the conditions

and the companies are unknown, or the shipbuilder thinks that the ship ought to cost more money than we do, then we are willing in certain cases to consider a form of contract which might be termed actual cost plus a fixed fee agreed upon at the time of the signing of the contract.

Senator NELSON. Your phraseology is not exactly clear to me, but I will put it in another form. You have tonnage contracts and lump-sum contracts, do you not?

Mr. RADFORD. I believe there were some contracts in the early days at so much per ton.

Senator NELSON. And then you have lump contracts?

Mr. RADFORD. Our recent contracts have, for the most part, been a straight lump sum of so much per ship; so many ships, at so much per ship, for delivery at such and such a time.

Senator NELSON. And then a commission allowed to the promoter?

Mr. RADFORD. No, sir.

Senator NELSON. Or the builder. Just a straight gross sum?

Mr. RADFORD. Just a straight sum. There are certain protective measures with reference to increase in the cost of labor, increase in the cost of material, and things of that sort, which are peculiar to the different contracts. I think you have copies of the contracts.

The CHAIRMAN. In some instances you contract for hulls, and in others for completed ships?

Mr. RADFORD. In the case of a steel ship, our contracts have been entirely—I speak now only of matters that have been within my knowledge during the time I have been in office—for the complete vessel.

The CHAIRMAN. Including all machinery?

Mr. RADFORD. Everything. We might elect to furnish the machinery if it were expedient to do so, but the price of the vessel is based on a total lump sum, which includes all of those items, and if we should elect to furnish the machinery, that would be a matter of adjustment in the contract.

Senator NELSON. Can you tell us off-hand without any trouble, how much those lump-sum contracts will average per ton?

Mr. RADFORD. I can tell you what it will work out roughly—about $160 a ton on the east coast for steel ships.

The CHAIRMAN. Per dead-weight ton?

Mr. RADFORD. Yes. And about $168 to $170 on the west coast. Those figures are no longer good, in the light of the recent proposals from shipbuilders, for the reason that they are very much in doubt as to the effect of the excess profits and war taxes, and they are very much in doubt as to the future effect of labor increases and as to future labor costs.

Senator NELSON. Are they not worried over the labor conditions?

Mr. RADFORD. Yes, sir; very much. That is evident at once; I see it right away, of course, in the attitude of shipbuilders in coming before the Fleet Corporation.

Senator HARDING. You cover that labor increase in your contracts, do you not?

Mr. RADFORD. We have recently, but there are contracts that have no labor protection whatever.

The CHAIRMAN. You mean there are builders not eager to make contracts on these terms, now?

Mr. RADFORD. On the straight lump-sum contracts?

The CHAIRMAN. Yes.

Mr. RADFORD. Without labor protection? Very few of them would be willing to do so except at a price we would consider prohibitive under the circumstances.

The CHAIRMAN. How about the wooden ships?

Mr. RADFORD. As to the wooden-ship contracts, there is no difficulty in obtaining offerings at a straight lump sum contract without protection on labor.

The CHAIRMAN. What is the price generally?

Mr. RADFORD. That I will have to give you later. It is in the neighborhood of $300,000 per hull.

Senator NELSON. How much will that average per ton, approximately?

Mr. RADFORD. It is about $85.

Senator NELSON. $85 a ton for wooden ships?

The CHAIRMAN. That is for the hull?

Mr. RADFORD. For the hull alone.

Senator NELSON. How much would it be for the complete ship?

Mr. RADFORD. About $525,000 from about $500,000 for earlier contracts to about $550,000 for recent vessels.

The CHAIRMAN. And that is how much per ton?

Senator HARDING. It would be about $160.

Mr. RADFORD. Yes, for recent quotations; about $140, according to these figures. I am referring now to the Fleet Corporation's memorandum of executed contracts dated December 17, 1917, which gives the prices per ton for complete wooden vessels, ranging from $125 to $159, and averaging $140.

Senator NELSON. So that wooden ships would cost $140 per ton and steel ships $165.

Mr. RADFORD. Or higher.

Senator NELSON. Higher?

Mr. RADFORD. Probably higher.

Senator NELSON. Considering the durability of the two classes of ships, don't you think it is bad policy to construct a large number of wooden ships at that figure?

Mr. RADFORD. Senator, I want to be perfectly fair about this. I stated, in the first place, that I knew very little about wooden ships. I do not consider I am qualified to pass on that question, but I can tell you that, from the feeling among the shipbuilders I have talked with—and I naturally have a general idea of how people feel about this—I should think the answer would be "yes."

The CHAIRMAN. You would not advise the discontinuing of wooden ships where they can be built in regions where the material can be found and where labor is not overcrowded?

Mr. RADFORD. Not in the present contingency at all. I feel that when men come before us and say they are able to produce ships without interfering with our existing program and without calling on labor that is employed on the shipbuilding program or other war work, it would be assuming a very grave responsibility indeed not to let them start. In other words, I am assuming that the first question to be answered is, Can we get these ships? And if the answer is yes, then, can you get them without interfering with the existing program? So it practically settles down to this, that, on the

west coast, at least, we can place a few more ships at present, and we are planning to do so.

The CHAIRMAN. Wooden ships?

Mr. RADFORD. Yes, sir. I am speaking only of wooden ships—utilizing only the existing organization and present facilities of those yards, yards that are now making good.

Senator NELSON. Not making new yards?

Mr. RADFORD. Not encouraging, in other words, the creation of additional shipyards.

The CHAIRMAN. How about the Gulf and South Atlantic in the pine region?

Mr. RADFORD. At present, I am informed, it hinges largely on the question of the lumber supply, which, I believe, has been a very difficult question to handle; particularly as regards transportation. It is a matter of investigation at the present moment, and our action will depend on the result of that investigation, but I am inclined to believe that we will not be warranted in building many more ships on this coast.

The CHAIRMAN. Is that on the ground that the lumber supply is limited?

Mr. RADFORD. Yes, and that transportation questions are involved, as well as the question of labor supply.

Senator NELSON. I suppose the building of these cantonments has taken a good deal of lumber?

The CHAIRMAN. Yes, but not ship lumber. The companies like to sell that, because that is not the big stuff that is required for ships; that is the small stuff that they have to cut to get the big stuff. So it does not really conflict very much.

Mr. RADFORD. I should say the conflict would be more in the line of the labor supply as far as cantonment work is concerned.

The CHAIRMAN. You do not hear complaints about the labor supply in the South do you?

Mr. RADFORD. I do not recall any complaints. In fact, I would not, Mr. Chairman. You see, the people that come before me are people that want to sell ships.

The CHAIRMAN. How long does it take, ordinarily, for you to make an investigation into a suggested contract?

Mr. RADFORD. It depends very largely upon the distance of the shipyard and conditions that are involved. If the yard is a well-established, going shipyard, with normal business, it should not take over a day or so. If the amount of work is such that we can go right to that particular problem and work it out, it ought not to take over a day. But the investigation itself is not the thing that would necessarily absorb time. It is more a question of the time required to obtain a meeting of the minds of the parties involved as to the terms of the contract, particularly with regard to price and such protective measures as are included.

The CHAIRMAN. You have to pursue those negotiations in your office?

Mr. RADFORD. Yes, sir.

The CHAIRMAN. How many people are associated with you directly?

Mr. RADFORD. I have had until just recently only one man with shipbuilding experience, and then a number of secretaries and clerical

assistants. I am now getting in four or five additional men who will be qualified to discuss the features of contracts. In other words, I have recently had instructions to expand this division.

The CHAIRMAN. Have you had anything to do with the designs and specifications and schedules?

Mr. RADFORD. No, sir; nothing whatever. That is all done naturally, by the technical department of the Construction Division. Invariably, however, that matter is taken up with those people when a proposal comes in. It is usually accompanied by plans and specifications, which are at once referred to the technical department to pass upon.

The CHAIRMAN. The plans and specifications are not kept in your office, but in the office of the architects?

Mr. RADFORD. They are kept in the office of the construction division.

Senator JOHNSON. Notwithstanding the desirability of steel ships, the emergency is such that we ought to obtain wooden ships as well, is it not?

Mr. RADFORD. That is what I said, substantially, a little while ago—in my opinion.

Senator JOHNSON. In your opinion, the policy that has been the policy of the Shipping Board from the beginning is the policy to be pursued?

Mr. RADFORD. To obtain all the ships that we reasonably can. The wooden ship in that case was an emergency measure.

The CHAIRMAN. How about the speed of construction as between the two?

Mr. RADFORD. I have not any information upon that. I would simply have to tell you something that I would sooner you got from Admiral Bowles who has actual charge of the construction of the ships. I presume it will vary as between plants and localities. We have had some very rapid steel ship construction recently.

Senator JONES. Where?

Mr. RADFORD. On the west coast, principally.

The CHAIRMAN. Are there any further questions to be asked Mr. Radford? If not, Mr. Radford, we are very much obliged to you. We will now hear from Mr. Bloomfield.

Mr. Bloomfield is here and Mr. Ferris is on his way. We will go on with Mr. Bloomfield.

STATEMENT OF MR. MEYER BLOOMFIELD, IN CHARGE OF THE INDUSTRIAL SERVICE DEPARTMENT EMERGENCY FLEET CORPORATION.

Mr. Bloomfield, please state your full name, age, and place of residence.

Mr. BLOOMFIELD. My name is Meyer Bloomfield; 39 years of age. My home is in Boston. I have been here since September 11.

The CHAIRMAN. What is your present employment, Mr. Bloomfield?

Mr. BLOOMFIELD. I am in charge of the industrial service department, which started as a department under the division of wood and steel ship construction, under Admiral Bowles.

The CHAIRMAN. Have you had any experience in that line of work before, Mr. Bloomfield?

Mr. BLOOMFIELD. In industrial service?

The CHAIRMAN. Yes.

Mr. BLOOMFIELD. Yes, sir.

The CHAIRMAN. State what it was?

Mr. BLOOMFIELD. For something like 17 years I have been practically giving all of my time to industrial problems. For more than 7 years I have given a large proportion of my time to the employment problems of organizations. Seven years ago I started the first association of employment managers in this country, the Boston Employment Managers' Association, which now has 200 members. That type of association has been repeated in most of the large cities of the country as far as San Francisco. During those seven years I have had the opportunity of coming in contact with the employment departments of hundreds of establishments, and I am in very close contact with the employment men all over the United States.

Senator NELSON. Does your association belong to the unions?

Mr. BLOOMFIELD. It is made up entirely of employees of large business establishments.

Senator NELSON. Union employees?

Mr. BLOOMFIELD. No, sir; they are the employment superintendents, directly under the general manager or president of a corporation.

Senator BANKHEAD. He does not belong to that class—unions.

Mr. BLOOMFIELD. They belong to the laboring class, but they are not organized into unions.

Senator NELSON. But you are not unionized?

Mr. BLOOMFIELD. Not yet.

The CHAIRMAN. What are your particular duties, Mr. Bloomfield?

Mr. BLOOMFIELD. The main purposes which led to the establishment of the industrial service department were, to use one phase, to deal with the man-power problem of shipbuilding, as contrasted with the problems of materials, the technical problems. Under the man-power problems, three distinct activities show: The problem of getting men—that is, the supply of employees for the yards; second, the problem of keeping men, because we have not an adequate labor supply to draw from; and to stabilize a working force is some job in any management, but it is particularly some job in connection with an industry which has certainly multiplied itself by 12 in a very limited labor market; and, finally, the third problem, that of fitting men, namely, working out the machinery whereby this inflow of new men may be economically and efficiently transformed into shipbuilding workers. I have not charge of what may be called the "labor problems," the controversial matters connected with the shipyards; that is in the hands of the wage adjustment board. Within 10 days a new division has been created within the Fleet Corporation, in the division of labor. Mr. Blackman is in charge of that division. My job—the job of my department—is to deal with the man-power organization of the shipyards, apart from the so-called labor problems.

The CHAIRMAN. Does not that involve duplication of work or possible conflict?

Mr. BLOOMFIELD. No, sir. It involves no duplication or conflict. It suggests a very close relationship. In other words, industrial service has to do with what you might call the preventive, the constructive side of the working force, and its problem, its relationship to the management. The labor side has to do with issues which have reached the stage of dispute and call for conference and negotiation. If the industrial service department can ever reach 100 per cent efficiency, it would probably reduce the job on the labor side, but I expect no such result.

Senator NELSON. Go on and tell us—excuse me, Mr. Chairman.

The CHAIRMAN. Go ahead.

Senator NELSON (continuing). How you operate.

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. What have you done to secure sufficient help and to educate that help and keep them in the service? Tell us exactly how you proceed.

Mr. BLOOMFIELD. When the department started, on the 11th of September, the first and obvious step was to get the shipbuilders together in order to tell just what their problems were in connection with the building up of their labor forces, and also to try to lay before them two or three fundamental propositions, in order that they might give their judgment as to whether the carrying out of those propositions appealed to them as practical shipbuilders.

Senator NELSON. Did you make a study of the shipbuilding labor forces of the country?

Mr. BLOOMFIELD. I shall mention that in a moment, Senator.

Senator NELSON. Oh, go on.

Mr. BLOOMFIELD. The shipbuilders were called to a conference on October 1, almost within two weeks of the creation of the department, and I should like to submit the verbatim report of that discussion.

The CHAIRMAN. Have you copies enough to go around?

Mr. BLOOMFIELD. There are copies enough. The underlying reasons for that shipbuilding conference was not only to ask the shipbuilders what they needed and what their problems were, and to show them how this department hoped to cooperate with them, but to lay three propositions especially before them: First, that by centralizing their employment in their own yards they would greatly reduce the leakage of men from the yards.

Senator NELSON. What do you mean by "centralizing"? Explain that.

Mr. BLOOMFIELD. I mean that the power to hire and discharge should be lodged in one place, in the hands of an intelligent and well paid and responsible man, who would know why men came or left an organization.

Senator NELSON. You refer to each shipyard?

Mr. BLOOMFIELD. Each shipyard. The prevailing factor there has been, to some extent, still is, as is the case in industry in general, to allow every foreman and every little sub-boss to take a man in in any old way and to fire him for any old reason. That is very bad business, and it is suicidal in the present stage of the labor market, from every viewpoint. There is every reason to have men cleared in each yard through one office.

Senator NELSON. In other words, you wanted one man in each yard to have the exclusive power to hire and discharge?

Mr. BLOOMFIELD. Subject to the advice and cooperation of the foremen and the management. And you will find figures, if you should like me to bring out the details, to show how wasteful and impossible any other proposition would be.

So we very clearly and emphatically dealt with the matter of appointing high-grade men as employment managers in the shipyards. I never heard one shipbuilder express himself—and I have heard a great many—in anything but in favor of the proposition. I have been asked by shipbuilders to recommend men to do that sort of work, and I have seen some very excellent employment departments grow since the creation of the Industrial Service Department.

The second proposition discussed at that conference was the nature of the resources open to a shipyard which is planning to start a working force out of nothing or to double or treble or quadruple its working force. That involved pointing out to the shipbuilders—and it is a lesson which is just as true for any other type of industrial employer—that if they would get behind the city, State, and Federal employment systems and bolster up that system and make it efficient and effective, and if they would learn how to plan their labor requisition week by week and month by month, so that instead of asking for 20,000 men when they could only use a thousand or a hundred, and upsetting the labor market—if by intelligent cooperation with the public employment machinery they would make their requisitions known, eliminating the private commercial agency supplying employees, they would help themselves enormously.

Senator NELSON. Did you advise them using these labor bureaus in the cities for securing men?

Mr. BLOOMFIELD. Yes; publicly supported labor bureaus.

Senator NELSON. You advised them that these "central" men, as you called them, who had to hire and discharge men, were to make the requisitions for help to these employment bureaus in the cities?

Mr. BLOOMFIELD. Established by city, State, or Federal authority.

Senator NELSON. And to secure their men through them?

Mr. BLOOMFIELD. To a large extent. The effect of that would be that men would have a common place for clearing, which would eliminate their wandering about with their tool boxes or standing in line. It at once makes, as it has been called, "a place for the manless job and the jobless man" to get together.

Senator NELSON. Would not that leave these labor bureaus with a sort of a monopoly of the business?

Mr. BLOOMFIELD. They are the creatures of the Federal Government, the State government, and the cities. I am opposed to anyone's receiving a fee from an unemployed man for getting him a job. The practice has been to hire a labor contractor in the past. Those men are not interested in reducing the labor turnover, the leakage of men. We are. We do not want more men hired or attracted to a community than there are jobs for them. We do not want them to come except when jobs are immediately ready for them, and there is only one way in which to get that result, and no other, and that is to develop the Federal scheme of employment officers, which is pretty extensive now in 34 States, and bolster up the State system of labor exchanges, and where a city has also established a system of labor exchange, as is the case in Ohio, where one of the best systems

in the country obtains, to use also the city employment office. This eliminates the private labor contractor.

The CHAIRMAN. You are opposed to calling on private employment agencies?

Mr. BLOOMFIELD. Well, I can not stop a shipbuilder from using any private contractor. I think he is unwise and behind the times.

The CHAIRMAN. You advise against that?

Mr. BLOOMFIELD. Yes.

The CHAIRMAN. But, in some communities, where they have no city or municipal or country, or even State system, or any official body to go to, what do you think of it in that case?

Mr. BLOOMFIELD. That is perfectly true, Senator, and that advice was not so wholesale that we did not face that situation. The last Congress gave a quarter of a million dollars to the United Stated Department of Labor. Recently President Wilson has turned over $850,000 further, so that there is more than $1,000,000 available for a wide extension of this employment service. Within a very short time there should be no shipyard community within the United States without some near-by public employment agency ready to help them. That is true of the Gulf; it is true of the North Atlantic, the Pacific coast, and the Great Lakes district.

Senator NELSON. But that relates only to volunteers; these employment agencies can not do anything unless volunteers come and offer themselves?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. Is not that true?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. But where they do not volunteer, what then?

Mr. BLOOMFIELD. Of course, a proper labor exchange system employs a number of labor scouts, who are often sent into the interior, attracting the attention of available mechanics to the shipyard program. As a help to that movement, the State councils for national defense have, with us, arranged for a campaign, which is proving effective. Massachusetts has already started under it; Pennsylvania is working under it—whereby the State Council for National Defense for the Public Safety Committee appoint a general director of war emergency employment. This man is a sort of general overseer of the State, Federal, and city employment scheme. A number of speakers are out recruiting. Still, it goes down to the volunteer, Senator Nelson, that is, if a man is attracted by a wage, he will apply for the job; if he is not attracted by that opportunity, he will not go to that shipyard or may not go into war industry. Have I answered your question, Senator?

Senator NELSON. Well, as far, I think, as you can.

Mr. BLOOMFIELD. I will be glad to go further into it, if you wish me to.

Senator NELSON. I do not think it is any use at present. Go ahead.

Mr. BLOOMFIELD. The third heading for the discussion which then took place in Boston, by way of opening up the industrial service program, was the training of men. To double the force of a shipyard or any organization does not mean to increase and double its efficiency or its output. As a matter of fact, it has a retarding effect on its efficiency to introduce a great many green men. We were confronted with this problem. The working forces of the shipyards

would have to be increased from, say, 80,000 or 90,000 in 1916 to 300,000 or 400,000 in 1918. The foremen would be under great pressure; every manager would be under great pressure. Men would come in, be asked to do a certain job, and if they did not do it they would be thrown out. Of course, that would be a lack of preparation.

Senator NELSON What did you do to educate them and train them, to equip them for the work?

Mr. BLOOMFIELD. Before the great drive started, or while this drive is about starting, we established the first of our so-called "instructor emergency training centers." Down at Newport News, in the shipyard there, at this moment there is a training school for skilled workment, sent officially by the different shipyards of the United States to learn a new trade, in addition to the one in which they are now skilled, namely, the trade of teaching their own trade. Last week saw the completion of the first course, the first class being graduated.

Senator NELSON. How large a class was that?

Mr. BLOOMFIELD. Seventy-two mechanics from about 25 different shipyards——

Senator NELSON. They were intended as teachers?

Mr. BLOOMFIELD. They will go back and become directors of training in their shipyards. You take the American International Shipbuilding Corporation. It has just sent down 30 workmen, and it is going to send a great many more.

Senator NELSON. This is a sort of normal school for the shipbuilders to educate teachers?

Mr. BLOOMFIELD. Precisely.

Senator NELSON. To teach the recruits how to work?

Mr. BLOOMFIELD. You take a shipfitter. He has to learn his trade, but he has never learned how to tell it to any other man or to tell it in an effective or economic way.

Senator NELSON. Have you schools anywhere else?

Mr. BLOOMFIELD. We are planning for other centers.

Senator NELSON. But have none now?

Mr. BLOOMFIELD. No, sir.

Senator NELSON. This is all you have done in the way of establishing educational institutions so far?

Mr. BLOOMFIELD. Yes. Of course, these men who now go back, the 72 men, can undertake training centers at once. A number of the old yards have some of them had apprentice schools for a long time. A number of States have evening courses for shipyard workers; some of the technical schools have also, but this is new. This is a normal school for shipyard workers who absent themselves for six weeks from their own yards.

Senator JONES. I thought in connection with that you might tell what expense that school is to the Fleet Corporation or to the Government.

Mr. BLOOMFIELD. In order to assist the shipbuilder and make it possible for him during this time of shortage to support the men and to make the matter as easy as possible, it was decided by the Fleet Corporation to reimburse the employer who sends these men to the shipyard to the extent of $5 a day, toward the expenses and wages of that man, provided that man completes the six weeks' course, and provided this workman in training agrees with the employer to stay in his own service for six months.

Senator JONES. That is, the employer keeps up the regular wages of the employee while he attends this school?

Mr. BLOOMFIELD. Yes, sir.

Senator JONES. And you pay back to the employer at the rate of $5 a day?

Mr. BLOOMFIELD. Toward the wages and the expense of keeping the man there.

Senator NELSON. At the rate of $5 a day, you say?

Mr. BLOOMFIELD. Yes.

Senator NELSON. For all of them, indiscriminately, no matter what their qualifications are?

Mr. BLOOMFIELD. The qualifications for the selection of that workman are certified in instructions sent to the employer and are passed upon also by the instructors down there at Newport News.

Senator NELSON. How many employees have you in your division, under you?

Mr. BLOOMFIELD. There are about 35 altogether.

Senator NELSON. Thirty-five in that branch of the work that you have described? What are they, mostly, typewriters and stenographers?

Mr. BLOOMFIELD. Perhaps one-third would be the instructors' staff down at Newport.

Senator NELSON. About a third?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And the balance are typewriters and stenographers that you have here in the office? You are the head of a division here?

Mr. BLOOMFIELD. Of a department.

Senator NELSON. Yes, of a department in the shipping corporation or with the Shipping Board; one or both. Now, what I am trying to find out is, How many have you in your department; how many employees?

Mr. BLOOMFIELD. I would be glad to give the names.

Senator NELSON. No; I don't care for the names. I want the number just now.

Mr. BLOOMFIELD. There would be possibly one-third of that number who are representative executives.

Senator NELSON. No, no. Why can you not give me the number?

Mr. BLOOMFIELD. Ten or 12 would be executives in my own office, 12 more would be instructors down at Newport News; the rest would be clerks.

Senator NELSON. Twelve in your office, and 12 down at Newport News, and what others?

Mr. BLOOMFIELD. The rest would be clerks and assistants.

Senator NELSON. And how many of them?

Mr. BLOOMFIELD. About 8 or 12.

Senator NELSON. Then you have 12 in the office here?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And 12 at Newport News?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And then, in addition to that, you have 12 clerks and assistants. What are they, mostly, stenographers and typewriters?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. Will you please state to the committee to what extent you have increased the labor forces in our shipbuilding yards?

Mr. BLOOMFIELD. It would be a wrong impression to say that I have personally increased it by any amount whatever. We have brought about a great many cooperating agencies. I can tell you what has happened, not through our special help, because the shipbuilders have known themselves how to get help. They have advertised and they have done a great many things, some of them in consultation with us; some of them on their own account; but the fact of the matter is that within the last 10 weeks the shipbuilding force has increased by over 45 per cent.

Senator NELSON. How do you account for that? Is it through the labors of your bureau or through other causes?

Mr. BLOOMFIELD. Both; all working together.

Senator NELSON. An increase of 45 per cent. Do not the unions object to your going to work and increasing the labor force of unskilled men, or do you not try to get unskilled men and educate them and get them into the service?

Mr. BLOOMFIELD. We get a great many unskilled men. There are not enough skilled men alive to do some of the necessary work in the shipyards. Your question is a broad one. For example, on the Atlantic coast, where most of the ships and the yards are so-called open shop, or have not direct agreements with the unions—the shipbuilder does not confer, so far as we know, with any organization, although that happens, too, here, as to his supply of men.

Senator NELSON. He can get them from whatever source he is able to get them, without restriction?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. How is it in the rest of the country?

Mr. BLOOMFIELD. On the Pacific coast the unions and the shipbuilders have had working arrangements for many years, and one of the arrangements with the union always is that so long as the union can supply a certain grade of mechanics the union shall have the first call in answering the employment needs of the employer.

The CHAIRMAN. What do you expect to accomplish by this school?

Mr. BLOOMFIELD. We make it possible for the shipbuilders to take care of this immense increase in new men in their yards, make it possible to convert these green men into shipbuilding material, and one reason why that is made possible is this: At Newport News these men learn what kindred trades—that is, what nonshipbuilding trades—have elements in common with shipbuilding, so that by the charts which I have here [exhibiting charts to the committee], showing an analysis of the shipbuilding trades—I shall submit these charts, Mr. Chairman—here [indicating] is an analysis of every shipyard important trade.

Senator NELSON. Now, recapitulate the important trades; for instance, in the wooden-ship building industry, the leading class of trades.

Mr. BLOOMFIELD. These analyses have been made, so far, for the steel ships.

Senator NELSON. What about the steel ships; what are the classes?

Mr. BLOOMFIELD. The drillers and reamers; the ship carpenters and their duties; the shopmen, doing the inside work in the yard.

Senator NELSON. Does not "ship carpenters" apply more to wooden vessels?

Mr. BLOOMFIELD. No, sir; both—loftsmen, riveters, chippers and calkers, ship fitters—all trades in the pipe shop. We have omitted the trades like machinists, which are pretty common trades; pattern makers.

Senator NELSON. Among what classes is there the greatest scarcity of labor?

Mr. BLOOMFIELD. In the classes of highest skill, like ship fitters.

Senator JONES. What lines of industry have lines in common with shipbuilding from which you hope to get labor?

Mr. BLOOMFIELD. A ship fitter is a man of ordinary or first-rate intelligence, who would be taken on at once as an apprentice for a ship fitter without any thought of going outside and picking out among the other trades. The ship fitter would come in of ordinary intelligence and go through the apprenticeship.

Senator JONES. Give us some example.

The CHAIRMAN. He has to learn from experience.

Mr. BLOOMFIELD. Largely.

The CHAIRMAN. Will there be much shortage as to ship fitters?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. Now, most of these men engaged in these trades are educated in what I would call "the school of experience"?

Mr. BLOOMFIELD. Yes.

Senator NELSON. They do not come from any kind of educational institutions?

Mr. BLOOMFIELD. No, sir.

Senator NELSON. They come in green hands and take it up in the trades they are working at, do they not?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. A green man comes into the shipyard and he gravitates to one branch or the other of skilled labor in time, does he not?

Mr. BLOOMFIELD. We have to expedite that process and economize in every way possible.

Senator NELSON. You speak about "economizing." Can you tell me how much it costs the Government a year to run your department—the force, including your salary and the salary of your employees, and everything?

Mr. BLOOMFIELD. I have not the figures for that; that is handled by the auditor.

Senator NELSON. Then you could give me the estimates?

Mr. BLOOMFIELD. Yes, sir—it probably costs $75,000 a year.

Senator NELSON. You said awhile ago that the Government had appropriated $800,000 for the labor department, and more had been set aside. What is all that money being used for?

Mr. BLOOMFIELD. The money appropriated for the public employment bureaus will be used, first—I hoped it will be used, first—to give the shipbuilders all help which they need, but it will also be used to help other war industries. It will be used to establish centers where the needs of all important war industries will be made known, and men who can be best used in a shipyard will not waste their time going to some other industry, or vice versa.

Senator NELSON. Now, is not this the modus operandi, Mr. Bloomfield, that when these shipbuilders want help they either advertise in the papers, or they go to these employment agencies and get their help; is not that the way they do it?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And they get it from these sources, and such other sources as they can?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. They take the men such as they get into the shops, and then they go on and train them and educate them, if they stay?

Mr. BLOOMFIELD. They do not do that very accurately; they have not time to do that, and often they have not the men who can do it for them.

Senator NELSON. No; but they employ them, and keep them in the yard to work?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And gradually the men become trained in that way?

Mr. BLOOMFIELD. A few of them.

Senator NELSON. Do you directly help in recruiting these men?

Mr. BLOOMFIELD. Yes.

Senator NELSON. In what way do you directly recruit them?

Mr. BLOOMFIELD. For example, we have two men, one traveling along the Pacific coast and one on the Atlantic coast, covering every technical school and college of any importance, for the purpose of selecting men who will make competent men next April and May, when the forces are so large.

Senator NELSON. You misapprehend me; it is not training the men you get; I mean what do you do to get the men? You will lay your hands on them, then you comb them up and fix them for some purpose—but how do you get the raw recruits; what do you do to get them?

Mr. BLOOMFIELD. The shipbuilder, with our help and with the help which we have established for them, are receiving a great amount of cooperation, which is bringing thousands of men to the shipyards.

Senator NELSON. Do you go out and hold meetings among laboring men and make speeches to them and tell them to enlist in the shipbuilding service?

Mr. BLOOMFIELD. There is a very extensive program, and a good deal of that activity going on through the country.

Senator NELSON. Is it going on through your department or the people doing it of their own volition?

Mr. BLOOMFIELD. Both. We have had a very active share in initiating that work and laying all of our plans for it and supervising it.

Senator NELSON. I know we had a lot of canvassers out for the Liberty Bonds. I was an humble canvasser myself. But I have never come across any canvassers to secure recruits for ship construction; have you?

Mr. BLOOMFIELD. Yes.

Senator NELSON. Where?

Mr. BLOOMFIELD. I hope this committee will provide an opportunity for the man who has established committees of 25 chambers of commerce—committees on cooperation with shipbuilders, Mr. Mr. Edward A. Filene, who is here. You will see there one angle of this active recruiting work.

I ought to say we have just completed plans with the committee, representing the 19,000 four-minute men. We helped prepare a bulletin for them to make a drive around the country for shipyard help.

Senator NELSON. I am not asking these questions for the purpose of criticizing your work. My purpose is to find out exactly what you are doing towards this shipbuilding program, what additions to the shipbuilding force you are directly instrumental in bringing in. How many recruits do you bring in per month?

Mr. BLOOMFIELD. We could never give that statistically, Senator Nelson.

Senator NELSON. Well, approximately?

Mr. BLOOMFIELD. May be none through our direct intervention.

The CHAIRMAN. You expect to get some from these technological schools?

Mr. BLOOMFIELD. Yes; some of the shipbuilders are very anxious to get hundreds of those men. It is an important service to the shipyard.

I would like to say, further, Senator Nelson, that we have secured men of this type who are working actually in a shipyard, building up the flow of labor. They are now on a job. Gov. Whitman has loaned us the services of the director of the State Employment Offices at New York City. He has given us that man without salary for six months. This man has a right to expand his force as much as may be necessary. He establishes himself in the shipyard most in need of immediate help in being shown how to build up their employment force. He is now at work with some shipbuilding company.

Senator NELSON. Let me, if you will allow a man who is only acquainted with prairie schooners, make a suggestion—it seems to me it would be a good plan for your department, if you wanted to do good, efficient work, practical work, to send out good speakers, in these communities where they have plenty of laborers, to make speeches to them.

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. Just as they did in the case of the Liberty bonds; tell them that we need more ships and that we are in need of shipbuilders, and "we want you to rush to the shipyards."

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. Have you done anything on that?

Mr. BLOOMFIELD. Yes, sir; a very active campaign.

Senator HARDING. Mr. Bloomfield, on that question, what would you think of a campaign by speakers among those who are adjacent to the employment and do not work?

Mr. BLOOMFIELD. I do not understand you, Senator.

Senator HARDING. What would you say to a patriotic speaking campaign among the men who are on the ground and do not work, or who work three or four days a week? Would that be helpful?

Senator NELSON. Excuse me—the Senator wants to know how you approach the I. W. W.'s. [Laughter.]

Senator HARDING. No; I am very serious about it. I want to know how we are going to reach the men who will not put in a full week's work.

Mr. BLOOMFIELD. Senator Harding, I am as indignant against the industrial slacker as your question suggests, and the purpose behind it and Senator Sherman's question the other day—an industrial slacker to-day might as well be a Prussian for his effect on the shipbuilding program. But it is not true that shipyard employees, on the whole, or that American workmen on the whole, are slacking. The problem of the absentee, of tardiness, is a serious problem, and I have some explanations to submit to this committee as to why men work only five days or three days and why some men do not give a week's output. I do not believe there is a man in this room who could work six days a week at the hard labor of shipbuilding, with the "cards stacked against him," as they are in some of the communities, because we have not taken hold of the trolley cars and the ferryboats and the houses and the other facilities. You ask a man to work 10 hours at riveting. He stands up in a cold car in the morning that takes him an hour to get to his yard. He changes cars in some places. He goes through that performance again at night. It is impossible for him to be efficient with the "cards stacked against him." Now, why do I say that the "cards are stacked against him"? I have taken those trolley rides myself with the men on Staten Island. I have gone down the ferryboats; I have a series of reports from investigators making those trips.

A shipyard on Staten Island has a slip. It could bring the men directly to the shipyard from Bronx, from Brooklyn, from lower New York. I addressed a workmen's meeting at noon time in that very yard, and a machinist told me that he gets up at 4 o'clock in the morning—a young man, a clean cut chap. He wants to do his bit. He gets up at 4 o'clock in the morning in the Bronx. There is no place he can rent on Staten Island. He will stay there as long as he can. It is unendurable. That shipyard has been negotiating with the owners of some excursion boats tied up for the winter in New York City. Those boats on a busy summer Sunday may be chartered for $125 a Sunday. There is correspondence here showing that the owners of one of these lines is asking that shipbuilder $13,000 a month for the rent of a large excursion boat and $8,000 for a smaller boat.

Senator JONES. You would call him a "profiteer"?

Senator NELSON. He ought to be punished.

Mr. BLOOMFIELD. I am discussing the industrial service problem, and by a process of elimination we will get down to the real problem.

Senator HARDING. First, what I want to find out is, is there anything to prevent us requisitioning those boats for the service?

Mr. BLOOMFIELD. Yes, sir. I have been after this thing for a long time. I saw what was crippling the shipbuilder. We were theorizing about some of these things instead of basing the practical handicaps and hardships with which these workmen have to deal every day to do their bit.

Senator NELSON. Would it be practical, Mr. Bloomfield, to house them on Staten Island.

Senator HARDING. That takes months.

Mr. BLOOMFIELD. This will take money. Yes, it is practical, absolutely.

Senator HARDING. And I suppose you could not get anybody but single men; married men would not want to go there.

Mr. BLOOMFIELD. The shipbuilders do not want single men if they can obtain married men. They want good, clean, steady class of men; and they do not want a barracks or camp around their shipyard, and there is no reason why they should have that.

Senator JONES. If you had authority to commandeer these ships you could take care of those conditions largely?

Mr. BLOOMFILED. Senator Jones, you would solve a large part of the wage problem; in my judgment, a great part of this wage agitation is due to the fact that some profiteers are beating us to it all the time.

Senator HARDING. Mr. Bloomfield, as we go on, let us get down to the point we are all interested in, the kernel of it. Do those conditions exist on the Pacific coast?

Mr. BLOOMFIELD. I have had no time in the short time I have been with the Shipping Board to know what has been going on directly on the Pacific coast. I should think not. I know Seattle well, and I know Olympia, Tacoma, San Francisco, Oakland, Long Beach, and San Diego. I should think that on the whole the men were fairly well housed and that the transportation is not a serious problem.

Senator HARDING. You know that it has been testified here that we have had to pay war premium to get full work out there.

Mr. BLOOMFIELD. I am left out of those conferences and discussions.

Senator HARDING. You have heard the testimony here?

Mr. BLOOMFIELD. I know that the cost of living has gone up.

Senator HARDING. That is not in dispute. You said it was the handicap on the east coast on account of these conditions, which I am quite ready to admit to a degree, and we ought to see if we can remedy it. But you think that does not obtain on the west coast?

Mr. BLOOMFIELD. I do not know, sir.

Senator HARDING. You heard it testified here—if you have not, it is in the record——

Mr. BLOOMFIELD. I have; yes; I was present.

Senator HARDING. That we are paying war premiums on the west coast in order to get the six days of labor.

Senator BANKHEAD. Senator, they are paying the war premium in place of a bonus over here, which I would describe as the same thing.

Mr. BLOOMFIELD. Maybe; I am not familiar with that.

Senator HARDING. Also, Mr. Bloomfield, is it a fact that shipyards are all 10-hour time.

Mr. BLOOMFIELD. No; they run all the way from eight, eight and a half and nine to nine and a quarter hours.

Senator HARDING. Are there many 10-hour plants working?

Mr. BLOOMFIELD. We have the information here, and I shall be glad to submit it, giving the number of shifts per yard in each place if you want this information.

Senator HARDING. I am curious to know, because it is in line with your revelation just now.

Mr. BLOOMFIELD. It would not reduce the hardships of travel no matter what are the hours, but it would be less burdensome to the workman if he is working only 8 hours than it would if he was working 10.

Senator HARDING. Mr. Bloomfield, let me call your attention to the fact that the law we passed on the 15th day of June gives the Shipping Board full power to commandeer such ships as you suggested a moment ago. If, I think, you will glance at that law you will find the Shipping Board has the power to take them over.

Mr. BLOOMFIELD. You mean we can commandeer the use of those ships for purely shipyard transportation purposes.

Senator JOHNSON. I think so. I think it is broad enough for that purpose.

Senator NELSON. I think so. That is my opinion. I agree with Senator Johnson on that.

Senator BANKHEAD. You have mentioned where these ships would be of advantage in carrying laborers to the shipyards. That is one case. Do you know of any other similar cases to that?

Mr. BLOOMFIELD. Not the ships. I know of cases of trolley transportation.

Senator BANKHEAD. I did not know but what there were other shipyards similarly affected.

Mr. BLOOMFIELD. No. That is why Admiral Bowles suggested trolley transportation chiefly, because our evidence shows what a serious handicap this trolley matter has been.

The CHAIRMAN. You have not had these difficulties that you mention on the Gulf or South Atlantic coasts?

Mr. BLOOMFIELD. Yes.

The CHAIRMAN. Where——

Senator JOHNSON (interposing). I think you were interrupted in the course of your explanation.

Mr. BLOOMFIELD. May I submit a report by and by to that point, unless you want me to take time to get at my papers?

The CHAIRMAN. You can pass that by for the moment.

Senator JOHNSON. I wanted to bring up the matter a moment ago when you were interrupted—that is, the question that has been suggested again and again concerning the slacking on the part of labor. Has there been any real slacking on the part of labor in this war?

Mr. BLOOMFIELD. Certainly not.

Senator JOHNSON. So far as shipbuilding is concerned, has it been your experience that labor has done its duty?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. If you want in that behalf to amplify any of the remarks you have made, I would be very glad to have you do so.

Senator HARDING. Maybe I can help you on that matter.

Senator JOHNSON. I would be very glad if you can.

Senator HARDING. Let me ask you, Mr. Bloomfield, if in your work you have encountered any agitation seeking to take advantage of this stress on the part of the Government?

Mr. BLOOMFIELD. Agitation on the part of the workers?

Senator HARDING. Yes.

Mr. BLOOMFIELD. No, sir.

Senator HARDING. Then, the leaders?

Mr. BLOOMFIELD. I suppose I really do understand the question; that is, have organizations and bodies of individuals tried to so improve their wages or get concessions in hours or get union recognition?

Senator HARDING. That is fair any time, we will say. I would like to put it in a little different vein, if I can: Has there been on the part of any of the labor organizations a disposition to profiteer?

Mr. BLOOMFIELD. Not in any large organized representative way. I suppose there have been individuals in the ranks; they are as human as their employers.

Senator HARDING. You know an individual could not achieve anything in that direction.

Mr. BLOOMFIELD. Senator, if a group of men should petition to an employer that they wished 10 hours reduced to 8, I should not consider that they were seeking to take advantage of the Government in its time of stress, and I know perfectly well that in their own minds they think and they are convinced that what they are trying to accomplish by these improvements in their conditions is, first, to make themselves more efficient as producers, more efficient as citizens, and to taste a little of that democracy that they are supposed to be fighting for. I have no evidence as to what some little group of disaffected men have done or what corruption may have worked behind them. I have heard that these things have happened.

Senator HARDING. Have you encountered any evidence of enemy agitation in the ranks of labor?

Mr. BLOOMFIELD. I have not or I should have gone very promptly to the Department of Justice.

Senator HARDING. Have you heard or seen any evidences of pacifist propaganda among the laboring forces?

Mr. BLOOMFIELD. It would not be the sort of evidence which could be called legal evidence, but there is this fact with which we have to contend, and I think that will answer the very important point which you are giving me an opportunity to discuss. Our big job, I have found, since I have come to Washington—I do not mean my own; I mean everyone who is trying to do his little part—is to sell this war to a large portion of the American people; not the majority. A number—a fair number—of good loyal, patriotic American citizens are going about their ordinary duties, as though it was somebody else's job to worry about this war and somebody else's job to make his contribution. They are letting "George" do it. I would like to say that neither Mr. Hurley nor the Shipping Board, nor a hundred shipping boards, will drive all these million rivets. One hundred million American men, women, and children will have to stand behind the shipbuilding program if we are to get the ships. Stand behind the shipbuilders; that is the work I am interested in. When every shipyard community gets the spirit that every automobile in that place, every pleasure car, every resource of that town belongs, first, to the shipbuilder, we will have our line of communication next spring what it ought to be. But if Washington must be depended on to supply the oxygen to the local communities and the poor shipbuilder with twelvefold organization has to worry about a thousand other problems, we are not going to get the ships. It is a problem for the whole American public. If there is pacificism, if there are signs of a lack of imagination or of disaffection, that is a problem for the whole American public. The Shipping Board is not going to cut much ice, except as we all see these dangers and speak of them frankly.

Senator SHERMAN. One thing that you made very plain, as I understand you rightly, is that in the vicinity of these shipyards,

where the men are housed or live, that the housing and local transportation facilities must be improved so as to take away a large part of the hardship incident to the coming and going at the beginning and ending of the day's work. I want to read here, with the permission of the chairman, so as to get it in the record, the act approved May 12, 1917, which provides [reading]:

That the President be, and he is hereby, authorized to take over to the United States the immediate possession and title of any vessel within the jurisdiction thereof, * * * and, through the United States Shipping Board, or any department or agency of the Government, to operate, lease, charter, and equip such vessel in any service of the United States, or in any commerce, foreign or coastwise.

The terms there are very general—"in any service"—so that I think the power is vested——

Mr. BLOOMFIELD. I think so. We will look into that at once.

Senator SHERMAN (continuing). In the Executive to take over the pleasure boat.

Senator NELSON. There is not any doubt about it.

Senator HARDING. I think it is worth while going into the record and I am going to ask you now, since the data is available, what percentage of the shipbuilding plants under contract are working 10 hours?

Mr. BLOOMFIELD. Sixteen per cent are on a 10-hour schedule or more; 31 per cent on a 9-hour schedule; 53 per cent on an 8-hour schedule.

Senator SHERMAN. May I state further, Mr. Chairman, that at Rock Island, Moline, Ill., and Davenport, Iowa, and East Moline the Navy Department has commandeered a part of the local transportation line connecting surface roads at East Moline. The War Department, through the arsenal at Rock Island, has taken all of the Tri-City roads, made up of Moline, Rock Island, and Davenport, that run across the Mississippi River, which constitutes another connection surface line of transportation. They have done that in the exercise of the naval and military power already vested in the President or the department. So that, I think, taking that with the act here there is complete power in the Shipping Board for Mr. Bloomfield and his associates to take over local facilities or to issue such directions as would make those in charge of them more amenable to reasonable charges for the transportation of the workmen. It is a very great hardship. In the area of which I spoke—Moline, Rock Island, and Davenport—there is approximately 60,000 workmen. There are nearly 10,000 at the arsenal on the island in the Mississippi River. There has been a good deal of conflict there, and there is conflict, or was, between the departments, because they were running at loggerheads with each other, but I think that has been adjusted, and by the exercise of that power it will greatly relieve the hardship that Mr. Bloomfield speaks of, in places where the workmen have to stand up going and coming, morning and evening.

Mr. BLOOMFIELD. I assume, Mr. Chairman and Senator Sherman, that when I laid the matter before Admiral Bowles suggesting those matters for legislation, that he must have submitted to our counsel the situation as regards our commandeering powers as to houses and as to transportation, or, let us say, land transportation. I will look into it again. I have a feeling that counsel must have said we shall need additional powers.

Senator NELSON. You have power in this law that has been cited to commandeer those ferry boats?

Mr. BLOOMFIELD. Yes; it would seem so.

Senator JONES. If you have any counsel that have advised you who had not authority under that law, I would like to know who he is.

Senator JOHNSON. The law I called your attention to was not the one Senator Sherman read, because I think that the law Senator Sherman read relates to enemy vessels rather than those of our own; but it was the later act that was passed.

Senator NELSON. What is that, if you have it here?

Senator JOHNSON. I have here the act last passed. But if you will follow that which Senator Sherman read a little further it says:

Authorized to take over to the United States the immediate possession and title of any vessel within the jurisdiction thereof, including the Canal Zone and all territories and insular possessions of the United States except the American Virgin Islands, which at the time of coming into such jurisdiction was owned in whole or in part by any corporation, citizen, or subject of any nation with which the United States may be at war when such vessel shall be taken.

Do you see?

Senator SHERMAN. There is another one in practically the same language.

Senator JOHNSON. There is another one in practically the same language passed in June, which I think gives ample power.

Senator JONES. Senator Sherman has the clause right here and I suggest he reads it.

Mr. BLOOMFIELD. This matter of that ferry boat is an isolated incident; of course, the great problem is that of street-car transportation.

Senator JONES. It seems to be a very important matter is that particular case.

Mr. BLOOMFIELD. I think it is very interesting.

Senator HARDING. How many men are quartered at that plant?

Mr. BLOOMFIELD. About 4,000. There are three other yards right near by, so that it is a pretty fair shipbuilding community.

Senator SHERMAN. This is in the act approved June 15, 1917, and contains the following language:

The President is hereby authorized and empowered, within the limits of the amounts herein authorized—

Among other things—

(e) To purchase, requisition, or take over the title to, or the possession of, for use or operation by the United States any ship now constructed or in the process of construction or hereafter constructed, or any part thereof, or charter of such ship.

The legislation is general in its terms.

The CHAIRMAN. And the President by Executive order conferred that power on the Shipping Board on July 11?

Senator SHERMAN. Yes, sir.

Senator NELSON. Mr. Bloomfield, you are well acquainted with the labor situation. I see that Mr. Hurley, the president of the board—in fact he stated it here, and I have seen it in the public press—is going to try and expedite the shipbuilding by having two or three ships under construction and putting in electric lights so that the men can work nights as well as days. Do you think it is possible to get the help for that purpose?

Mr. BLOOMFIELD. I do; yes, sir.

Senator NELSON. You think we can get enough people so that it will be possible to expedite the building of ships by having three eight-hour shifts in our shipyards?

Mr. BLOOMFIELD. Yes, sir.

The CHAIRMAN. Is there great diversity as to wages paid in the different yards?

Mr. BLOOMFIELD. I think there is. The matter of wages never comes within my jurisdiction.

The CHAIRMAN. That, perhaps, is the occasion for the passing of labor from one yard to another?

Mr. BLOOMFIELD. That has had something to do with it.

The CHAIRMAN. What would you think about this, Mr. Bloomfield, as a plan: Suppose you would undertake to learn the present working conditions in the various factory and shipyard work and the various grades of mechanics employed in each branch of each factory, together with the wages paid for each grade, and then finally formulate a set schedule of wages, based on the highest prices paid by the majority of manufacturers?

Mr. BLOOMFIELD. That is the correct procedure, and it has been in process right along, and it should be very efficient. That is the right way to proceed.

The CHAIRMAN. You favor some development in that direction?

Mr. BLOOMFIELD. Yes, sir.

Senator HARDING. Mr. Chairman, apropos of your discussion, I just happen to have one contract here before me. I do not know whether it is the rule in all contracts, but there is a contract here before me [indicating] that has a basic scale of wages; and any change in that wage necessarily changes the compensation to the shipbuilder. Would you like, while you are making inquiries to ascertain whether this basic scale is widely different in different sections of the country?

The CHAIRMAN. I should think so.

Senator NELSON. I suggest, Mr. Chairman, that we ask the Shipping Board or the Fleet Corporation, or both of them combined—they are practically identical—to furnish us information as to the wages paid for the different classes of men in the different shipyards that are now engaged in building ships for the Emergency Fleet Corporation.

The CHAIRMAN. Yes; that information can be inserted in the record at this point.

(The statement referred to was subsequently furnished by Admiral Bowles and is here printed in full, as follows):

Minimum rate will be $1.04 per diem less than maximum rate. Scale as of Nov. 1, 1917, with the exception of Mare Island and Puget Sound; they are as of Jan. 1, 1917.]

Ratings.	Portsmouth.	Boston.	Newport.	New York.	Philadelphia.	Washington, D. C.	Indianhead.	Norfolk.	Charleston.	New Orleans.	Pensacola.	Mare Island.	Puget Sound.
Group 1.													
Attendants:													
Dispensary	35	35	....	33	32	33	42	28	....	28	....	....	34
Powder factory	....	....	....	....	....	....	48	....	....	....	....	....	....
Boys	21	22	22	21	19	....	18	16	18	18	15	21	20
Charwomen	....	....	....	....	....	25	....	....	....	....	....	....	32
Coal handlers	....	....	....	....	36	....	....	....	....	....	....	....	36
Deck hands	....	....	35	....	....	....	....	....	....	....	....	....	....
Deck hands, ferryboat	....	....	36	....	....	....	....	....	....	....	....	....	....
Hod carriers	....	....	40	40	40	35	35	31	28	28	....	44	....
Janitors	34	34	34	34	....	33	33	25	25	28	25	32	....
Laborers, common	34	34	34	34	33	33	33	26	23	28	25	32	32
Stable keepers	34	34	34	34	33	33	33	28	28	....	....	44	36
Teams, double	....	....	....	....	....	....	65	....	....	....	....	....	....
Teamsters	37	37	35	37	37	....	....	27	26	28	....	34	34
Teamsters with teams	....	....	....	....	....	....	....	....	....	....	....	....	75
Group 2.													
Cupola men	....	....	....	....	....	....	....	....	31	....	....	....	....
Cupola tenders	....	....	....	....	47	51	....	....	....	....	29	....	....
Dredgers	....	....	....	....	....	....	....	....	31	....	....	37	....
Hammer men	....	....	....	....	....	....	....	....	....	35	....	....	....
Hammer runners	42	42	....	....	40	43	....	....	....	....	....	....	....
Helpers:													
Blacksmiths	....	....	36	....	....	36	36	....	33	....	33	....	....
Boat builders	....	....	....	....	36	....	....	....	....	....	....	....	35
Boiler makers	37	37	....	37	36	36	....	33	33	33	33	35	35
Coppersmiths	34	37	....	37	36	36	....	33	31	....	33	35	35
Divers	....	....	....	37	....	....	....	33	....	....	....	....	....
Electricians	37	37	36	37	36	36	36	33	31	....	33	35	35
Forgers, heavy	....	41	....	....	....	....	....	....	....	....	....	....	....
General	37	37	36	37	36	36	36	33	31	31	33	33	35
Laboratory	....	37	37	37	....	36	44	....	....	....	33	....	....
Machinists	37	37	36	37	36	36	36	33	33	33	33	35	35
Metal workers	....	....	....	37	....	....	....	....	....	....	....	....	....
Molders	37	37	36	37	37	36	36	33	31	33	33	35	35
Ordnance	....	....	....	37	37	....	....	34	....	....	....	35	35
Painters	....	37	....	....	36	....	....	....	28	33	33	35	35
Pipe fitters	37	37	....	37	33	36	36	33	31	....	33	35	35
Plumbers	....	....	....	....	....	....	36	....	....	....	....	....	....
Riggers	....	37	....	....	36	....	....	33	28	....	....	35	35
Ropemakers	....	37	....	....	....	....	....	....	....	....	....	....	....
Sheet-metal workers	....	....	....	....	36	36	36	33	31	33	33	35	35
Ship fitters	37	37	....	....	36	....	....	33	33	33	33	35	35
Shipsmiths	38	38	....	38	36	....	....	34	....	....	....	35	35
Shipwrights	....	....	....	....	36	....	....	....	....	....	....	38	38
Smiths	....	....	....	....	....	....	....	....	....	33	....	....	....
Steelworkers	....	....	....	....	....	....	....	....	31	....	....	....	....
Woodworkers	37	37	....	37	36	36	36	28	28	....	....	....	....
Holders on	38	38	....	44	38	....	....	38	37	33	33	35	35
Oilers	....	....	....	....	37	37	37	35	....	....	....	38	38
Rivet heaters	28	28	....	32	26	....	....	25	....	....	33	....	....
Weighers	....	....	....	....	....	....	....	....	23	....	....	21	....
Prime workers (female)	....	....	32	....	....	....	....	....	....	....	....	....	....
Helpers:													
Flange turners	37	....	....	....	....	....	....	....	....	....	....	....	....
Special	....	....	....	41	....	....	....	....	....	....	....	....	....
Female operators	....	....	....	....	34	....	....	....	....	....	....	....	....
Group 3													
Acetylene operators	52	52	....	53	53	....	....	50	48	48	52	53	53
Angle smiths	60	60	....	61	59	....	....	....	59	....	....	....	56
Armature winders	....	....	....	....	....	62	....	....	59	....	....	....	....
Blacksmiths	....	....	50	....	....	62	62	....	....	....	59	....	....
Block makers	....	42	....	....	....	....	....	40	....	....	....	....	49
Boat builders	58	58	....	61	59	....	....	58	55	55	55	57	57
Boiler makers	60	60	60	61	59	62	62	59	59	59	59	55	55
Bolters up	....	....	....	....	....	....	....	....	42	....	....	....	....
Box makers	....	44	....	....	....	43	....	....	....	....	....	....	....
Buffers and polishers	44	....	....	46	....	55	....	38	40	....	43	....	50
Butchers	....	....	38	....	....	....	....	38	....	....	....	....	....

Ratings.	Portsmouth.	Boston.	Newport.	New York.	Philadelphia.	Washington, D. C.	Indianhead.	Norfolk.	Charleston.	New Orleans.	Pensacola.	Mare Island.	Puget Sound.
Group 3—Continued.													
Cabinetmakers									55				
Cable splicers						62			51		56		
Calkers:													
Wood	57	57		59	53	54		53	52	52		63	63
Shippers, iron	60	60		61	59			59	59	59		51	51
Canvas workers						58							
Carpenters, house	58	58	58	61	59		60	58	50	55	50	54	54
Casting cleaners	39				34	43							
Cement finishers					55			55			50		
Chauffeurs	38	40	40	40	37	40		32	36		32	38	38
Checkers								33					
Concrete workers		50			34					40		40	43
Coopers		45		45				43				51	
Coppersmiths	60	60	60	61	59	62		59	59	59	59	58	58
Core makers										34			
Cranemen		40		40	40	43		40	37				
Diesinkers	68	69		69		65		68		68		63	
Divers		75	84	120	100			113	100	125			125
Drillers	47	47		48	47			43	43	43		42	42
Electricians	60			61				59	59	59	59	53	54
Chronograph							74						
Radio	66	66			69	66		75	65	66	66	66	69
Storage battery		75		75				75					
Electric dredge operators									59				
Electric welders						62							55
Electroplaters	51	51	53	55	55			55		55	63	60	60
Engineers	59	59	59	59	59	59	59	59	59	59	59	55	45
Crane													50
Electrical													50
Fire												56	
Locomotive								59					50
Marine				56			53						
Pile driver				53	50						44		
Fabric workers											44		
Farriers	45			50	53								
Firemen	38	38	38	38	37	38	38	31	30	38	34	41	38
Flag makers													29
Flange turners	64	64		64	53			64	63			60	60
Forgers:													
Drop		67		64		66		70				65	
Heavy	72	68	60	77	71	71		72	69			65	66
Foundry chippers			36	38									
Frame benders	66				64				64			63	62
Frame and plate benders						46				39			
Furnacemen:													
Forge						46		40				46	
Foundry			46		48	46		38			35	46	46
Galvanizers	45	45		45	45			45	40	45		45	46
Gardeners	38	39	39	39	39	35	35	35	28	38	30	36	38
Heaters, furnace		45				46							
Instrument makers				75							65	54	63
Ironworkers							62						
Joiners	58			61		60		58		55	55		
Ship		58				60			55			57	57
Lead burners							86						
Leather workers	39					50						45	
Lens grinders, telescope						62							
Letterers and grainers			52	56		58							
Levelers	56	50			50								
Linemen									38		38		
Loftsmen		66			66				66			61	63
Machine operators			53			48						44	44
Machinists	60	60		61	59			59	59	59		55	55
All around			61			62	62				59		
Electrical	60		60		59	62	62				59	55	
Floor or vise hand							62						
Tool hand													
Toolmaker						62					59		
Torpedo			67										
Marine engine erector													63
Masons:													
Brick	60	65	64	65	66	67	67	65	50	65	63	70	75
Stone	60	65	64	60	60	67		65	50				
Mattress makers					44								
Mechanics, electrical										59			
Molters	44	44		44									
Open hearth						81							
Metallic cartridge case makers						49							
Millmen		58		61	53	50			50		50		54

Ratings.	Portsmouth.	Boston.	Newport.	New York.	Philadelphia.	Washington, D. C.	Indianhead.	Norfolk.	Charleston.	New Orleans.	Pensacola.	Mare Island.	Puget Sound.
Group 3—Continued.													
Millwrights	....	60	....	....	....	....	....	....	....	....	59	....	....
Model makers, wood	....	....	....	....	....	60	....	....	....	....	....	....	....
Model testers	....	....	....	....	....	49	....	....	....	....	....	....	....
Molders	60	60	60	61	59	62	....	59	59	59	59	55	55
Irregular woodwork	58	....	....	....	....	....	....	....	....	....	....	....	....
Steel casting	....	....	....	....	59	62	....	....	....	....	....	....	....
Motormen	....	....	....	....	40	....	40	....	....	....	....	....	....
Oakum spinners	....	35	....	....	....	....	....	25	....	....	....	....	....
Ordnance men	48	51	51	51	51	51	51	51	45	....	....	50	50
Packers	38	38	39	38	....	....	....	31	38	....	38	38	37
Painters	51	52	52	52	52	52	52	52	51	51	51	50	50
Pattern makers	60	60	60	61	59	62	62	59	59	59	59	63	62
Pavers	....	56	....	56	56	....	....	50	48	....	....	....	....
Pile drivers	....	....	....	....	....	....	....	40	....	50	50	....	51
Pilot, ferryboat	....	....	50	....	....	....	....	....	....	....	....	....	....
Pipe coverers	....	....	....	....	55	....	....	55	47	43	43	52	52
Pipe fitters	60	60	60	61	59	62	62	59	59	59	59	54	54
Plasterers	55	62	62	62	63	67	....	63	60	60	60	53	75
Plumbers:													
House	60	60	60	61	59	62	62	59	59	....	59	59	....
Ship	60	60	....	61	59	....	....	59	59	59	....	53	53
Pressmen	....	....	....	38	....	....	....	....	....	....	....	....	....
Punchers and shearers	47	46	....	50	48	....	....	40	40	40	....	41	....
Railroad conductors	....	....	....	....	....	....	....	45	....	....	....	....	....
Riggers	55	55	52	57	52	55	55	53	52	51	47	56	53
Riveters	60	60	....	61	59	....	....	59	59	59	....	57	51
Machine	....	....	....	....	....	....	....	....	54	....	....	51	....
Boilers, brass and copper	....	....	....	....	....	55	....	....	....	....	....	....	....
Rodmen	47	....	47	47	48	43	43	43	....	43	....	39	43
Roofers	....	60	....	61	....	....	....	59	46	....	44	....	....
Ropemakers	....	47	....	....	....	....	....	....	....	....	....	....	....
Sailmakers	55	55	....	55	55	....	....	55	52	48	....	56	56
Sand blasters	....	43	....	....	....	46	....	....	....	....	....	....	....
Saw filers	52	63	....	68	66	....	....	66	55	....	....	55	58
Seamstresses	....	....	....	30	38	32	....	32	....	....	....	29	32
Sewing-machine operators	....	....	....	....	38	....	....	....	....	....	....	....	....
Sheetmetal workers	60	60	....	61	59	62	59	59	59	59	59	60	60
Ship fitters	60	60	....	61	60	....	....	60	60	60	60	59	59
Shipsmiths	60	60	....	61	59	....	....	59	59	59	....	54	54
Shipwrights	58	58	....	61	59	60	....	58	55	55	....	57	57
Sparmakers	58	....	....	....	....	....	....	....	....	....	....	....	....
Steam fitters	....	....	....	....	....	....	....	....	59	....	....	....	....
Steelworkers	....	....	....	....	....	59	....	....	....	....	....	....	....
Stevedores	....	....	....	40	....	....	....	....	....	....	....	....	....
Stonecutters	52	52	....	....	....	53	....	56	....	....	....	....	....
Switchmen	....	37	....	37	37	....	....	....	41	....	....	43	....
Tinners	....	....	56	39	....	....	....	....	....	....	55	44	....
Tool dressers	51	51	....	....	....	....	....	....	51	....	....	....	....
Toolmakers	60	60	....	....	59	....	....	59	59	59	....	58	58
Tool sharpeners	....	....	....	....	....	....	....	41	37	....	....	....	....
Towermen	....	....	....	....	....	....	....	....	....	....	....	....	63
Trackmen	36	37	....	....	....	49	49	50	40	....	32	35	....
Turbine bladers	....	....	....	....	....	....	....	....	59	....	....	....	....
Upholsterers	50	50	....	50	50	44	....	50	47	....	....	51	50
Varnishers and polishers	....	....	....	52	....	....	....	....	....	....	....	....	....
Water tenders	....	....	....	40	39	....	40	36	38	....	....	....	....
Wharf builders	53	54	53	55	52	....	....	53	50	50	49	53	50
Wheelwrights	....	49	....	49	....	....	....	48	48	....	....	50	....
Wiremen	....	60	....	....	....	62	62	....	46	52	....	....	....
Wireworkers	....	....	....	47	47	....	....	....	44	....	45	....	....
Woodworkers, and aero	....	....	....	....	....	....	....	....	....	....	58	....	....
Drivers	....	....	....	41	....	....	....	....	....	....	....	....	....
Furnace men (open hearth)	....	....	....	....	....	46	....	....	....	....	....	....	....

Senator JOHNSON. Mr. Chairman, a memorandum has just been handed to me with regard to the two men named Cotton, as to whom we had a discussion this afternoon. The statement says that Joseph Potter Cotton, of 14 Wall Street, New York City, is a member of the firm of Spooner & Cotton, counsel for the Federal Reserve Board, and a member of the New York State Commission on Workmen's Compensation Law; and he is the attorney who was spoken of here.

He did not reside in Duluth, Minn., nor was he the attorney for the Steel Corporation; but that was Joseph Bell Cotton, instead of the Joseph Potter Cotton who was mentioned here to-day.

Senator NELSON. I see, but he is in New York also at this time, and has been there for quite a long while.

The CHAIRMAN. Is it the desire of the committee that we shall continue to hear Mr. Bloomfield when we meet to-morrow?

Senator HARDING. Well, Mr. Chairman, my preference is not more important than that of any other member of the committee, but I should not think that Mr. Bloomfield was anywhere nearly through with is statement yet. I should like to have him elaborate a little more, and tell of the handicaps that exist in the shipbuilding situation with regard to labor; I think that is a very important matter on which we want to have full information.

The CHAIRMAN. Then, in the absence of objection, we will hear Mr. Bloomfield to-morrow afternoon, and after he has finished we will hear Mr. Ferris.

(Thereupon at 5.05 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. Thursday, January 3, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

THURSDAY, JANUARY 3, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met pursuant to call at 2 o'clock p. m., in the committee room, Capitol, Senator Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Martin, Bankhead, Nelson, Jones, Sherman, Harding, and Johnson.

The CHAIRMAN. Mr. Bloomfield, you mentioned yesterday some of the obstacles to the effectiveness of labor in connection with shipbuilding, and you had discussed that subject to some extent, but had not finished with it.

You may now take that subject up and proceed with it, if you will.

STATEMENT OF MR. MEYER BLOOMFIELD, IN CHARGE OF INDUSTRIAL-SERVICE DEPARTMENT, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—Continued.

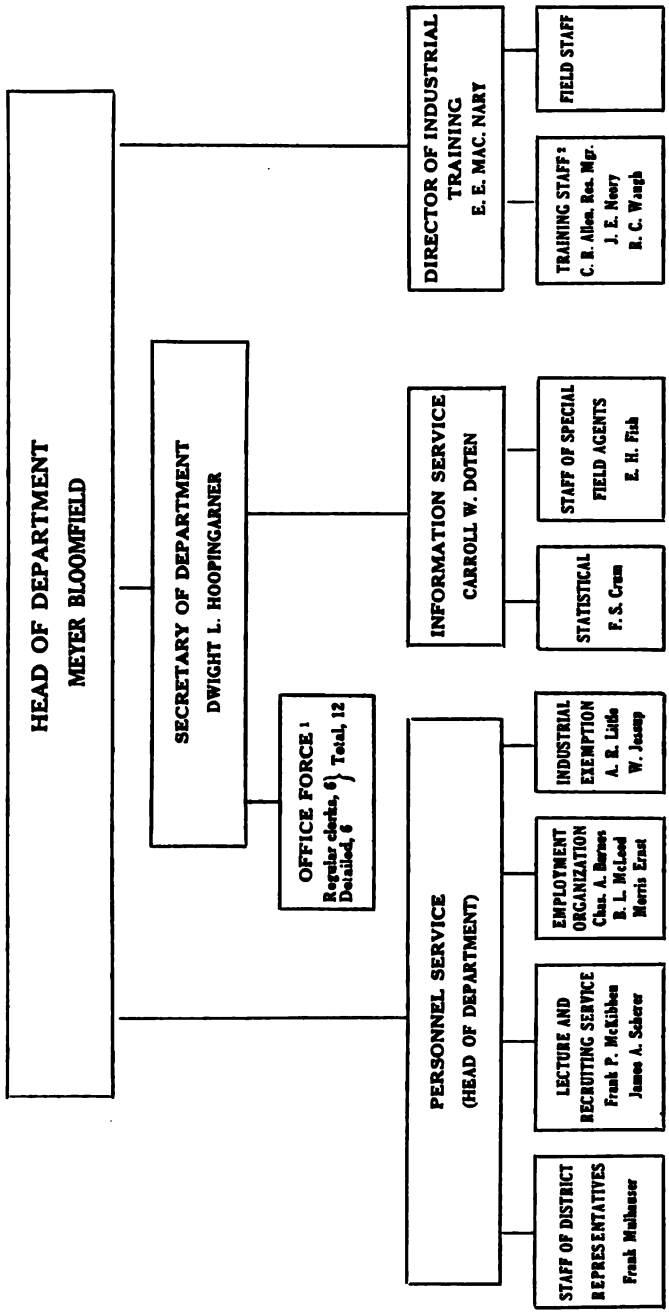
Mr. BLOOMFIELD. I should like to begin, Mr. Chairman, by submitting a chart of the organization of the industrial-service department of the Fleet Corporation, and a detailed statement of its work, and the staff, with their salaries. I would like to submit that in answer to a question that was asked yesterday.

The CHAIRMAN. If there is no objection, the chart and statements may be inserted in the record.

(The chart and statements referred to are here printed in full on following page.)

ORGANIZATION CHART, INDUSTRIAL SERVICE DEPARTMENT.

DIVISION OF CONSTRUCTION.



[1] Includes 12 clerks and stenographers (7 detailed). Does not include McAulliff (Barnes' secretary).
[2] Does not include temporary staff of 10 instructors.

ADDITIONAL ACTIVITIES OF THE INDUSTRIAL-SERVICE DEPARTMENT.

In addition to the functions indicated on the chart, the industrial-service department is also—

1. Cooperating with Admiral Rousseau's committee on housing.
2. Cooperating with the Council of National Defense, committee on States.
3. Directing the shipyard employment managers' committee on standard forms.
4. Preparing Manual of Employment Practice for Shipyards.
5. Preparing Manual on Shipbuilding Work Opportunities.
6. Promoting organization of shipyard foremen.
7. Promoting conferences by districts of shipyard employment managers.
8. Promoting conferences by local groups of shipbuilders and groups of public employment officials, chamber of commerce committees, etc.
9. Organizing groups of specialists for services on demand of shipbuilders.
10. Recruiting campaign among technical schools and colleges.
11. Organizing personnel departments in the shipyards.

Pay roll for industrial-service department for period ending Dec. 31, 1917.

Meyer Bloomfield, head	$5,000	Francis H. Wing, instructor	3,952
C. R. Allen, industrial training expert	4,000	Owen D. Evans, instructor	4,758
E. E. MacNary, member of staff	4,000	George A. Burridge, instructor	2,600
James E. Neary, charge vocational service	3,500	C. E. Parsil, instructor	3,900
Frank Mulhauser, special representative	3,500	Harry L. Jones, instructor	4,030
Richard E. Belches, clerk	1,200	John P. Casey, instructor	3,120
H. C. Waugh, assistant in industrial training	3,000	James E. Dougan, instructor	5,512
E. H. Fish, assistant in industrial training	4,000	Amos R. Little, exemption expert	3,500
D. L. Hoopingarner, assistant in industrial training	3,500	Joshua Davis, janitor	780
Carroll W. Doten, assistant in industrial training	4,000	Luther V. Scott, clerk	1,500
C. H. Willingham, stenographer	1,300	H. Leon Sharmat, clerk	1,200
James McKinney, instructor	2,600	Charles B. Barnes, employment expert	1
E. M. Longfield, instructor	4,284	James A. B. Scherer, lecturing and recruiting	1
		Leo F. A. McAuliff, clerk	2,000
		Verna M. Diecks, clerk	1,560
		Claude J. Merchant, instructor	2,860
		Frank P. McKibben	3,500
		Total	88,658

NOTE.—This does not include the following, to be entered on pay roll January 1: Frederick S. Crum, statistician, at rate of $4,000, three days per week; Wilfred Jessup, exemption expert, $3,500; B. F. McLeod, employment expert, $1; and Morris Ernst, employment assistant, $1. Neither does it include clerks detailed to this department, seven in number.

Summary.	December.	January.	Total.
Personnel service:			
Heads	9	[1] 4	13
Clerks	5	[1] 2	7
Training service:			
Heads	4	.....	4
Instructors	10	.....	10
Clerks	2	.....	2
Total	30	.....	36

[1] Have reported for duty, but not on December pay roll.

Mr. BLOOMFIELD. I should like further to submit for the record a complete report of the industrial-service department. I have copies of them here.

The CHAIRMAN. Is there any objection to that going into the record?

Senator NELSON. No.

(The report referred to is here printed in full, as follows:)

The industrial-service department was opened on September 11 for the purpose of organizing methods of (1) getting men; (2) keeping men; (3) fitting men.

To care for the first, two conferences were called, printed records of which are herewith submitted, laying the foundation of proper employment management, instead of advertising for thousands of men and bringing them to the shipbuilding centers, when no jobs were ready for them. The yards have been helped to plan week by week and month by month labor requisitions, so that men could be absorbed as fast as needed and sent only when needed.

In other words, every shipyard is being helped to organize a centralized employment department. Cooperation has been established with the United States Free Employment Service, and shipyards have been instructed how to use the Federal, State, and city employment offices exclusively.

The effect of this work is to stabilize the labor market. Through the Council of National Defense committee on cooperation with the States a plan is being carried out to centralize all employment work in every State under a director of war emergency employment, appointed by each State council of defense.

A recruiting service is being carried on to secure men from the technical schools and colleges, whose services will be absolutely needed in the shipyards by next spring.

To help the shipyards carry out round employment methods a squad of employment specialists is touring the shipyards. The director of this squad was loaned to this department by Gov. Whitman. He is the head of the New York State employment system.

A weekly information service covering every yard comes to this department, enabling it to keep in touch with the ebb and flow of labor in every shipyard under the Emergency Fleet Corporation.

A series of foremen's meetings is in process, so that yards throughout the country may instruct their foremen how to handle the working forces in order to secure stability and efficiency. Representatives of this department are in touch with various shipbuilding committees, reporting on physical conditions, sources of friction, and on other constructive measures, for the building up of the working forces.

Organization is now in process for reducing the labor turnover, so called, in every shipyard, so that there will be no unnecessary hirings and discharges.

This is done, as the printed reports show, through the creation of a system of transfer of men to departments in which they can make good by checking up the number of leavings and the leakages of men under various foremen and by holding the centralized employment department in each shipyard responsible for knowledge as to what is going on in the handling of the working forces.

Separate reports are herewith attached from the information service, industrial-training section, and the exemption section of this department.

Mr. BLOOMFIELD. I submit also a report of the training school at Newport News, and the charts used in analyzing the trades; also some charts showing the kindred trades which are related to shipbuilding. This has reference to a question which came up at the hearing yesterday.

I will now try, Mr. Chairman, very briefly to speak of two or three of the principal obstructions to the speeding up of the shipbuilding program; obstructions for which no fleet corporation or shipping board, nor the Government itself, can be said to be responsible.

I want to deal very briefly with some statements concerning transportation to the shipyards. The importance of dealing with transportation lies in this fact: Unless workmen find it, not easy, but fairly possible without too great a drain on their energies, to go to a shipyard and come from a shipyard, they will not stay there. This is

shown by some of the statements which I am about to read, or to which I will refer very briefly.

A question was asked yesterday as to conditions in the South. We have just a few reports in thus far from our investigators, who are investigating all the means of transportation to every shipyard in the country. The reports are now coming in.

From Savannah, Ga., we have the statement that—

The demand for the class of labor needed by us in the construction of these ships is so great that, unless we afford our men fair accommodations and reasonable transportation, it will be impossible for us to retain their services. We have already lost hundreds of men for the season that they would not submit to the inconvenience and uncertainty involved in going to and coming from our plants.

I have been given a blue print showing the transportation situation there.

Let us take, for example, the trolley company in Camden, N. J.; its cars pass the plant of the New York Ship Building Co., and are taxed to the utmost capacity at all times and at rush hours especially. If the trolleys are behind the scheduled time, they will pass the Pennsylvania Ship Building Co. plant without stopping to take any men who are waiting there.

The point that I should like respectfully to submit is that the shipbuilder must come first in the present war program. Priority ought to be the habit as regards transportation and other things I shall mention in a moment.

Senator NELSON. I believe the street cars are not placed in the same position as the railroads under Secretary McAdoo.

Mr. BLOOMFIELD. That is true.

Senator NELSON. Would you suggest, then, that the Government be given the same authority over them as over the railroads?

Mr. BLOOMFIELD. Yes.

Senator NELSON (continuing). In connection with these shipyards?

Mr. BLOOMFIELD. Yes; it will help every shipyard.

Senator NELSON. At how many shipyards does this acute condition exist? You explained one case there at Staten Island last night, and now you have mentioned those cases at Savannah, Ga., and Camden, N. J. What other places are there that are suffering from anything of that kind?

Mr. BLOOMFIELD. From my personal knowledge I may begin with the Fore River Ship Building plant at Quincy——

Senator NELSON. Massachusetts?

Mr. BLOOMFIELD. Massachusetts, which now employs more than 10,500 people.

Senator NELSON. Are they dependent upon trolley lines?

Mr. BLOOMFIELD. A large proportion of the workers are.

Senator NELSON. Do they use the steam trains at all?

Mr. BLOOMFIELD. They use both.

Senator NELSON. And boats?

Mr. BLOOMFIELD. Not boats. The men come from a distance. May I say that, in the absence of proper authority such as the railroads have now received, the Fore River Ship Building Co., since last May, have been urging a railroad there to establish workingmen's trains at convenient times; it has not yet been done.

Senator NELSON. They have not yet done it?

Mr. BLOOMFIELD. Not yet.

Senator SHERMAN. We do that in Illinois, in connection with the coal mines. They run special trains morning and evenings to carry the miners. Sometimes there are as many as 8,000 or 9,000 of them that require transportation.

Senator NELSON. I would suggest to you, Mr. Bloomfield, that you confer with the members of the Shipping Board, and have them go to the President and ask him to exert his authority over the trolley lines. He can take the same steps with regard to them that he took with regard to the railroads of the country; he can commandeer them; that is, he can commandeer them to the extent that is necessary for the shipbuilding forces.

Mr. BLOOMFIELD. I shall be glad to take up your suggestion, Senator Nelson.

Senator SHERMAN. That can be done under existing law.

Senator NELSON. Yes; under existing law.

Mr. BLOOMFIELD. The same situation obtains in regard to four yards on Staten Island, the workingmen there depending on ferryboats, railways, and trolley cars. Those three systems of transportation need to be taken hold of; every one of them has been unsatisfactory.

Senator NELSON. Well, instead of leaving this question in an academic state, the thing to do, Mr. Bloomfield, is for the Shipping Board to lay these matters before the President and show him the necessity for action, and I have no doubt that he will move in the matter, and if he does take action he can relieve the situation.

Mr. BLOOMFIELD. You were asking me to name other yards; that is why I am referring to those.

Senator NELSON. Yes; you may proceed. Excuse me for interrupting.

Mr. BLOOMFIELD. The situation in Newark, N. J., must be expected to be unsatisfactory, because those three enormous shipyards are away out on the salt marshes, and I believe that they are working out a solution of the difficulties there. It is to be expected that yards in process of completion in what has been no man's land so far will not have immediately adequate transportation.

Senator NELSON. I should think that the men who built the yards there in those cases, where they go into a new, undeveloped country, would build in connection with the yards the trolley lines necessary to reach them.

Mr. BLOOMFIELD. Well, that is a subject which is not within my jurisdiction.

Senator JONES. They have not done it?

Mr. BLOOMFIELD. I think in some cases the shipbuilders and the trolley companies have arranged for spur tracks.

Senator JONES. In what cases?

Mr. BLOOMFIELD. I can not give them to you just now. Mr. Doten tells me that that has been done at Hog Island; I have no personal knowledge as to that.

Senator JONES. That is a yard where the Government is furnishing the money?

Mr. DOTEN. One of those Newark plants has the same situation.

Mr. BLOOMFIELD. I think the Pennsylvania Railroad has itself extended a railroad into the yard.

This is true, of course, as to the Camden yards. It is true as regards Baltimore and the big yards at Sparrows Point; it is true as regards Newport News. Those are yards that I have myself inspected as to their transportation.

Senator NELSON. Are the Baltimore yards reached by trolleys?

Mr. BLOOMFIELD. By trolley and train; the service is very inadequate.

The CHAIRMAN. Have they not come to some arrangement there recently in regard to transportation and also in regard to housing?

Mr. BLOOMFIELD. Mr. Flannery, who represents Mr. Hurley, is at work on the details of that situation, and he will report on it later. I am not sure that that matter has reached a final stage.

Now, if I may, I would like to say a few words with regard to housing. I suppose the greatest and the loudest complaints from the shipyards—from the shipbuilders—has been in connection with the housing situation. By "housing situation" I mean not only a shortage of houses but a shortage of patriotism on the part of some housebuilders who will not rent, but insist on selling, their houses.

Senator NELSON. And have there not also been efforts to impose excessive rents?

Mr. BLOOMFIELD. There have been.

Senator NELSON. You ought to publish a gazette in connection with your activities, giving the country the names of those profiteers who are trying to bleed the Government under those circumstances.

Mr. BLOOMFIELD. May I tell the committee about one personal incident, so as to give this information at first hand? We were sending down this splendid staff of instructors to Newport News; men who were giving up good jobs; some of them were volunteering and others were tearing themselves away from contracts running for a year or more in other work to come and help out in this emergency training scheme. It was highly important to have them live together so that in the evening they could confer about their problems, and thus get team play in the staffs. A builder there was building a new house; he was approached by the director of our training school to see whether the house as a whole could be rented. For a month he kept jumping prices for that house. Finally, he wore out the patience of this staff, which is doing at the moment one of the most vital pieces of work for the Government; and they finally, through the good offices of some people in Newport News, went into boarding houses.

Senator NELSON. What is the name of that man?

Mr. BLOOMFIELD. I do not know, sir. Mr. MacNary knows.

Senator NELSON. I think you ought to give us the name.

Mr. BLOOMFIELD. There is no reason why you should not have it, Senator Nelson, but I do not know it myself. Of course, the principle that should be followed is that when shipbuilding needs accommodations there should be no time wasted.

Senator JONES. Is Mr. MacNary here?

Mr. BLOOMFIELD. He is not here; he is at Newport News.

Senator JONES. I thought it would be very well for us to have the name of that man in connection with your statement.

Senator NELSON. Do not be timid about giving his name.

Mr. BLOOMFIELD. I do not recall it.

Senator NELSON. Well, you can supply it, can you not?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. The proof of your statement will be handed to you for revision, and at this part of your record you can put in the name of that profiteer when you get it. It is important that his name should go down to posterity.

Mr. BLOOMFIELD. Yes, sir.

Senator BANKHEAD. If you are going to publish the names of all the profiteers in this country you will make a big volume. [Laughter.]

Senator NELSON. It will be as big as a city directory.

Mr. BLOOMFIELD. I spent one entire morning at the shipyard, and I saw the employment manager take an automobile and send an assistant through the town to look for quarters for the men. After three hours he came back with one place the rental of which was such a price as the ship fitters for whom he was trying to find a place could pay. The ship fitters were very much needed of course in that organization. Three hours was spent fishing around trying to find quarters.

Senator NELSON. And they could not find a place?

Mr. BLOOMFIELD. There were places; but the rentals were not right. In my judgment, the places should have been taken first and the rental discussed afterward, in view of the present emergency.

Now, I could go on, Mr. Chairman, with detailed reports from various communities on the housing situation, but Admiral Bowles has already submitted a plan with regard to that, and I have mentioned these things merely by way of supporting evidence.

In England they have controlled the rentals of houses since 1915, and they have a billeting act besides, which enables them to take care of the war workers. Some form of price control will probably be inevitable in this country later on, for the reason that a question was asked the other day by one of the members of this committee of one of the witnesses as to where we are going to end with these rises in wages? We will end in bankruptcy if the present forces are in control and keep chasing us around in circles, raising prices with rises in wages.

Senator HARDING. Right there, Mr. Bloomfield, what would you have price control cover?

Mr. BLOOMFIELD. I would begin with rentals right away.

Senator HARDING. Well, how far would you go?

Mr. BLOOMFIELD. The English rule is that the rentals shall be practically what they were for a year or two prior to the war.

Senator HARDING. No; you misunderstand me: How far would you go in your price control? What would you make it cover?

Mr. BLOOMFIELD. I should not want to theorize about it, Senator Harding. I would base each price ruling on a survey; on organized information relating, first, to the bare essentials which go to make up the workingman's budget. That would be the beginning. Now, those bare essentials cover—we have already taken that in hand partly—fuel, shelter, clothing, food.

Senator NELSON. But if you came to fix the rental, would you not inquire as to the cost and value of the building——

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON (continuing). To ascertain what would be a fair rental for it?

Mr. BLOOMFIELD. Yes, sir, absolutely; but I would make sure that there was no war value attached to that building.

Senator BANKHEAD. Suppose you should take a man's building and he has to go out and get one somewhere else for his family; who is going to help him when it comes to regulating rentals? He has to go out and pay whatever they charge him, has he not, or else do without a home? How would you manage that side of the case? Do you understand what I mean?

Mr. BLOOMFIELD. No, sir; not exactly.

Senator BANKHEAD. Well, my suggestion is this: If you go out at one of these shipyards and commandeer a man's home for shipbuilders, and he has to move out; suppose he has a family, a wife and children; he will then have to go out and look for another home for his family, will he not?

Mr. BLOOMFIELD. Yes, sir.

Senator BANKHEAD. Well, how are you going to regulate the prices that are going to be charged that man when he goes out to look for another home?

Mr. BLOOMFIELD. The commandeer which I have in mind is not a suggestion of any evictions; I am not thinking of that sort of thing; I am thinking of fairly available accommodations now, which will be used, which can be taken advantage of in some districts where there are the most serious housing problems.

Senator BANKHEAD. I understand that; but they are all occupied by families, are they not?

Mr. BLOOMFIELD. They are not fully occupied. There is no reason, generally, why families should be disturbed; but there is every reason why no one should be permitted to charge a fancy price for a room which should have a normal rental. There is no reason why a large colony of cottages near the Fore River shipbuilding plant, for example, should now be closed for the winter, and the huge colony of summer cottages, 20 minutes away from the shipyard at Newport News, should be closed up for the winter.

Senator BANKHEAD. I quite agree with you about that where the houses are unoccupied.

Mr. BLOOMFIELD. The commandeering of available resources and the control of rentals need not be anything very drastic, except in the case of the profiteers. In my judgment the placing of such power in the hands of the Shipping Board will serve to loosen up the situation marvelously.

Senator BANKHEAD. Well, that may be true.

Mr. BLOOMFIELD. Just the reaction of that power would be very effective.

Senator NELSON. If that power existed, you might not have to actually exercise it?

Mr. BLOOMFIELD. I should hope we would not have to exercise it drastically.

Senator NELSON. But you would go out and get those buildings that are vacant and for rent at some price?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. And then those cottages that the people occupy in the summer time, there is no reason why they should not be commandeered, because those people during the war should stay at home

in the summer, instead of going to the seashore; they could forego that pleasure—during the war, I mean.

Mr. BLOOMFIELD. They might be given the chance to work in those shipyards, and use their own homes.

Senator JONES. Have many of those people tendered the use of their cottages to the Government?

Mr. BLOOMFIELD. I have not heard of any, Senator Jones. I shall believe that we are in the war with both feet when I see more evidence of that sort of thing.

Senator NELSON. Well, has an effort been made by the Fleet Corporation or the Shipping Board, through any of its representatives, to secure those cottages?

Mr. BLOOMFIELD. Of course, Mr. Flannery, under Mr. Hurley, is vigorously at work on this job. The shipbuilders have spent an enormous amount of time personally on those problems. Some of them have engaged men specially for the purpose of hunting up houses, negotiating rentals, and making arrangements for houses; and in many instances those efforts come to naught.

I should like to say a word, Mr. Chairman, as to the third proposal submitted by Admiral Bowles, to declare a war zone in connection with the shipyards.

Senator JONES. Just explain, please, what you mean by "war zone." Probably you were going to do it anyhow.

Mr. BLOOMFIELD. To declare a shipyard, and a certain region round it—I am not sure whether it should be a thousand feet or more—a military area, under guard by the United States Government, through its Shipping Board or Emergency Fleet Corporation representatives.

Senator NELSON. That is mainly to remove all chances of dissipation, is it?

Mr. BLOOMFIELD. It is, first, to afford better protection. I was at Newport News two weeks ago, the night before the battleship *Mississippi* was to be started off to the Norfolk yard. There was a very nervous feeling among the shipbuilders there. Here are shipyards. Here is the United States Government in every one of these yards. There is almost nothing to indicate that it is not some old, private, ante-bellum yard. For purposes of protection, for purposes of bringing out the real significance of the shipyards as Uncle Sam's first line of defense just now, a war zone would be a wholesome measure from every viewpoint.

Senator NELSON. There would be two purposes, of course, to be accomplished by that, Mr. Bloomfield, would there not—one is to keep spies away and the other is to remove chances of dissipation among the laborers?

Mr. BLOOMFIELD. I was not thinking so much of reforming the laborer as of creating the proper and respectful attitude to the shipyard.

Senator BANKHEAD. In other words, you want to look out for the fellow who might throw a bomb into the yards or some form of explosive with which he might damage materially the yards and ships?

Mr. BLOOMFIELD. Under present conditions a workman who would be searched or that would be asked to leave his bag or check his stuff

at an office would say: "What business have you to do that? I have worked for you three or four years. You are working for Uncle Sam, but I do not know that you are officially a Government yard." We have not got that idea across. It is pretty hard to dramatize that. You automatically settle that in the mind of everyone by those regulations; and, furthermore, I hope that if a war zone is declared in every shipyard there would be appropriate exercises connected with the investing that shipyard with that authority.

Senator BANKHEAD. If you declared a war zone about the shipyard it would apply equally to employees and everybody else—visitors and others?

Mr. BLOOMFIELD. Everybody, every citizen, every manager.

Senator NELSON. I think that power is given in the spy law.

Mr. BLOOMFIELD. I have been advised that only the War Department and the Navy Department have that power. We have not.

The CHAIRMAN. What kind of a guard would you think ought to be placed in such a zone as that?

Mr. BLOOMFIELD. A guard representing the United States and not the local police, and, still less, the local shipbuilder or local detective bureau.

The CHAIRMAN. Would you keep that in effect night and day?

Mr. BLOOMFIELD. If necessary.

The CHAIRMAN. Depending on circumstances, I suppose, as to the number that would be required for that?

Mr. BLOOMFIELD. Yes, sir.

Senator JONES. As I understand, you do not have in mind, as a part of this war-zone idea, the prohibitions we put around military posts and camps?

Mr. BLOOMFIELD. I think that would follow almost automatically.

Senator JONES. It would not follow if we did not give them authority to do it like we have given the Secretary of War. Do you think you ought to have authority in reference to vice dens and liquor dens?

Mr. BLOOMFIELD. Yes, sir.

Senator JONES. Is that what you include in "your war zone"?

Mr. BLOOMFIELD. Yes, sir.

Senator JONES. You do not think a thousand feet would meet that situation very well, do you?

Mr. BLOOMFIELD. No; I have not studied the exact area that would be necessary.

Senator NELSON. Here is a paragraph of the spy law of chapter 1, section 6:

> The President, in time of war, or in case of national emergency may by proclamation designate any place other than those set forth in subsection (a)—

That is, arsenals, dockyards, etc.—

> of section one hereof in which anything for the use of the Army or Navy is being prepared or constructed * * *.

These ships were constructed for the use of the Army and Navy to carry troops and to carry supplies—all your vessels are?

Mr. BLOOMFIELD. I understand that is not so.

Senator NELSON. Some of these shipyards can avail themselves of the spy law, because they are mixed yards. We call them "mixed

yards" when they have a Navy contract as well as emergency-fleet contracts.

Senator JONES. That is, most of the ships that are contemplated in this program are under control of the Shipping Board instead of the Secretary of War or the Secretary of the Navy?

Senator NELSON. Those vessels are to be used for the Government for the benefit of the Navy or Army.

Mr. BLOOMFIELD. We will take that up, if you think we are mistaken in coming here and asking for legislation on this point.

Senator JONES. You have had the opinion of your legal advisers that this spy law does not cover it?

Mr. BLOOMFIELD. I am so informed; that we need special legislation.

Senator MARTIN. Why do you not get the opinion of the Attorney General? It is certainly important enough to justify it.

Mr. BLOOMFIELD. I think it is very important, from every viewpoint, and also from the viewpoint that the rather crude phrase which I used yesterday in the matter of "selling the war to the community."

The CHAIRMAN. What would you think, Mr. Bloomfield, of the idea of keeping enlisted men on board vessels who are qualified mechanics and who could do many things that are required to be done on board a vessel, and for which mechanics and outside men are called in to attend to, and giving such men extra pay to do that sort of work; for instance, mechanics who are capable of doing it?

Mr. BLOOMFIELD. The matter of compensation is a big subject by itself. It is a complicated subject. I should be glad, Senator Fletcher, if you would excuse me from passing on these matters and ask Mr. Piez and Mr. Blackman, who have full charge of all wage matters and compensation matters, so that I may not be appearing to cover the ground of others who are expert in particular fields.

The CHAIRMAN. I thought you might consider the effect on labor and the views of labor people of that idea. I have information to the effect that, for instance, it often occurs on board a vessel that there is some repairs needed, something to be fixed here and there—woodwork, steelwork, or something of the sort, and that among the crews enlisted and serving on that vessel are men perfectly capable of doing that sort of work, and if they were allowed to do it, and be paid extra for it, it would save the necessity of bringing in men from the outside.

Mr. BLOOMFIELD. Have you reference to the union rules regulating that sort of thing?

Senator NELSON. The unions would not allow it.

The CHAIRMAN. Yes; I wanted to see whether there was any reason why that should or should not be done.

Mr. BLOOMFIELD. That brings up a very big question of policy. It is one of the vexed questions, it is one of the questions which has been dealt with in England. I ought to say this, Senator, that the working men will tell you that for a century they have been trying to establish certain wage standards and certain conditions. There are certain conditions which have grown up, systems, and so you see each year at the labor conventions so-called "jurisdictional fights," and often within an establishment there are these jurisdictional interferences. There is a story behind that situation. It is not the cussed-

ness of the man that is responsible for it. It produces a very disagreeable situation at times, I confess; but England entered into an arrangement with its organized workmen that if labor is to give up all the practices, all their limitations and restrictions, permit dilution, have women to take the places of men, have four or five unskilled or semiskilled men doing what one all-around man did, by subdividing the all-around man's work—I say, the English Government entered into a formal agreement with the unions, that if the unions in view of the emergency would absolutely throw over all these protections and safeguards and barriers and customs, the unions would be assured by the Government that after the war there would be immediate effort made to restore those conditions, and that is precisely the arrangement under which England is working. Now, to apply that situation to our country, if we should have 3,000,000 or 4,000,000 of our men withdrawn from industry and set apart for war purposes, as is the case in England, and we should have to go into wholesale dilution of labor, and bring women into industries which have never employed them before, the question you ask would be solved and be answered by a frank, open, mutual arrangement between the workmen affected, the employers, and the Government. In the absence of such an arrangement, I do not expect that the men who have given their lives to a craft, and whose all in the world is represented by the standards and the conditions of the craft, would wish to see that situation treated informally any more than I would expect any storekeeper or property owner to have his all treated in an improper way. I have given you a very long answer to a simple question.

Senator NELSON. It seems to me, Mr. Bloomfield, speaking about the English situation and considering that they are going to give the women the right of suffrage, do you suppose that all those women who have been employed by the Government in various employments will submit tamely, after they have been equipped with suffrage, to being excluded from the fields they have occupied during the war? Do you suppose they can relegate those women to the rear again?

Mr. BLOOMFIELD. I do not pretend to be an expert or judge in those matters.

Senator NELSON. I want your judgment on that.

Mr. BLOOMFIELD. I am very sure that the woman will not be easily disposed of; certainly not by a wave of the hand. I am very sure, too, that a large part of the women will make common cause with the labor which is confronted with that situation, so that there will be a getting together of minds and work the problem out.

Senator NELSON. In all your long answer you have never come to an answer to the concrete question submitted to you by the chairman, and that is, "Why should not the sailors on board of a vessel who enlisted as sailors or as soldiers, if there were some necessary repairs to be made, be allowed to do it?" You have not answered that question yet.

Mr. BLOOMFIELD. I thought I had, but I will try again.

Senator BANKHEAD. The unions would not submit to it.

Mr. BLOOMFIELD. I do not know of instances where a vessel, specially a Government vessel, has been held up.

Senator NELSON. That does not answer the question. Come right down to it and answer the question.

Mr. BLOOMFIELD. I wish I could get a specific case. I find it hard to answer, because I see, on the one hand, a very legitimate union or good labor practice. I see a danger of breaking down an industrial situation which has a good deal of merit, which despite its faults has something to be said in its favor. You make it harder by speaking of a vessel. I suppose if a vessel needed help and could only get it by drawing in Tom, Dick, and Harry to do that work there would be no trouble about doing it. It is pretty hard to visualize the exact situation. I do not believe labor men on board ship, seeing a necessary repair to be made and no one else available, would stand in the way of anybody's going to do the work.

Senator JOHNSON. If the Senator has concluded on that branch of the subject, may I take up another?

Senator BANKHEAD. Let me ask just one question.

Senator JOHNSON. Surely. I was going to another subject.

Senator BANKHEAD. Have you thought, Mr. Bloomfield, of the practicability of ascertaining whether or not men in these camps all over the country, drafted men, soldiers, who are capable of doing this work—carpenters, machinists, and men of that sort—and whether there would be objection to detailing them for this work?

Mr. BLOOMFIELD. I want to thank you for bringing this matter up so as to make it possible for me to talk very briefly on the exemption work. The new selective draft regulations now provide that the shipbuilders may secure the exemption of their men or, rather, may secure the substitution of shipyard employment for military service.

Senator BANKHEAD. That is their own men, but I am talking about these enlisted men in the military camps.

Mr. BLOOMFIELD. I will come to that, Senator, in my next point.

That has been a most salutary help from every angle to the shipbuilder. In addition, Secretary Baker has arranged with the Shipping Board that valuable men who have been drawn from the shipbuilding industry and are now in the Army may be returned to their previous employment on request of the shipbuilder. We have received the names already of 300 men. That work is just beginning. We have secured the return of more than 100 men needed in the shipyards. There is now, at my suggestion, going on in the Army a survey in each camp of shipbuilders in the necessary 15 or 20 trades in the shipyard work so that shortly we shall have a complete roster of shipbuilders now in camp waiting for ocean transportation, and it is arranged that we shall have those men returned. As soon as we know who they are and as soon as we make sure that there will be jobs awaiting them, and that they can be properly restored to service——

Senator BANKHEAD. That is all right, but you have not quite got my point yet. If you should go into those camps you would find a great number of first-class mechanics, carpenters and mechanics, who might go into a shipyard and very readily take up some branch of the work; do you not think so?

Mr. BLOOMFIELD. The only reason we have not done that, so far, Senator, is because there are now throughout the United States, tens of thousands of unemployed carpenters and others in the build-

ing and erecting trades. The labor market is packed with high-class workmen who can not get work, as a result, first, of the finishing of the cantonments and the stagnation of the building industry. Those men, hundreds of them, are securing employment in shipyards right along at the present time.

Senator HARDING. Are men taken from the Army furloughed or discharged from the service?

Mr. BLOOMFIELD. It was found, after considering different plans, that they must be discharged back to the yard, and if they proved to be undesirable material and do not come up to the responsibilities which that discharge involves they can be certified for recall.

Senator HARDING. What are the conditions of exemption?

Mr. BLOOMFIELD. The conditions are, under the law, that those engaged in the building or fitting of ships—that is, those who are doing manual work in the shipyards or are engaged in the manufacture of essential equipment for ships—may be exempted if the employer makes this request known to the Emergency Fleet Corporation. The Fleet Corporation, through its representatives, and through its knowledge of the situation, makes sure—without imposing any red tape in the present situation—that the exemption requests are proper. Then the machinery is as follows: There is a card, called "an Emergency Fleet card," on which is entered the name of each man whose exemption is called for by his employer and demanded by the Fleet Corporation, and that is sent to the local district board. That local district board has no jurisdiction over a man certified by the Fleet Corporation. Automatically the exemption board puts that card away in the so-called "EF" file—Emergency Fleet file. The name remains on that file, provided during the first five days of each month, when that man is reported upon by the employer and ourselves, he is still engaged in shipbuilding. If he is no longer engaged in shipbuilding, we send a notice to that effect to the exemption board, after which the man is like any other registrant.

Senator NELSON. Will he be drawn into the military service again?

Mr. BLOOMFIELD. That depends on the exemption board, on his serial number. He is like any other man, but he will not be unless he had been called.

Senator NELSON. He must be called de novo?

Mr. BLOOMFIELD. Yes, sir.

Senator HARDING. Is any specific amount of service required to make the exemption valid?

Mr. BLOOMFIELD. This has been left to the judgment of the shipbuilder purposely, in order, first, to give him control of the whole situation.

Senator JOHNSON. You mean the private shipbuilder?

Mr. BLOOMFIELD. The different shipbuilders; yes.

Senator JOHNSON. That is, if a particular individual who is building ships would himself determine whether a man was exempt from military service?

Mr. BLOOMFIELD. All that he determines is whether or not he desires this man in his service.

Senator JOHNSON. But his certification would be conclusive, would it not?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. May I turn to another subject?

Senator JONES. Just a moment, Senator.

Senator JOHNSON. Excuse me.

Senator JONES. Do you apply this survey that you are making to soldiers already in France?

Mr. BLOOMFIELD. No, sir; we can not touch the men abroad. Senator Johnson, if I may recur for a moment, the exemption is just two weeks old. The safeguards against the abuses which are possible, the mistakes, the misjudgments are in process of organization. The main point is just now that the shipbuilder may have his working force intact. There was no provision for revision and counsel in passing on his declaration of exemption or not.

Senator JONES. In regard to that same matter, may I inquire whether you are going to make your regulations about that uniform all over the country or whether you are going to make one regulation for one part of the country and another regulation in another part of the country?

Mr. BLOOMFIELD. It will be uniform everywhere.

Senator HARDING. Mr. Bloomfield, is labor content to accept the dictum of the employer on this question?

Mr. BLOOMFIELD. I have heard suggestions of complaint on that score, and my answer was, as the regulations are now drawn up they call for the names of employees engaged in shipbuilding. Well, now, to be employees they must be on the pay roll of some shipbuilder. The regulations do not provide that in general men who are shipbuilders shall be exempt. I have no objection to any such regulation. I had nothing to do with drawing this up, but, finding them as they are, namely, stating that men may be exempted who are employed and who are engaged in building ships, we have to rely upon the employer to give us the name of the employee.

Senator HARDING. Do you not think it would be fairer to the man himself if some disinterested agent of the Government should pass on his eligibility to exemption?

Mr. BLOOMFIELD. I should approve of that.

The CHAIRMAN. Recurring now, Mr. Bloomfield, to the question I asked some time ago, based on a communication to me suggesting that one way of effecting economies would be—

by giving compensation to enlisted men for work to be done which requires the sending of men from navy yards. This could be done by paying the enlisted men the same wages paid to outside mechanics for the time employed in repairs. This would make the enlisted men feel better and save the waste of sending men from a distance. I have the information from a source that I do not doubt that on one vessel two men were sent from the navy yard to do some mechanical repairing. When these two men arrived at the vessel one of the enlisted men was doing the work. The other two men spent more time in putting on their overalls and examining surroundings than work, besides, before the working-day time was over, these men prepared themselves to return to the yard while the enlisted man kept on working and finished the work.

Whether that would save very much or not I do not know; but there is a specific instance. You said you would like to know someting of a specific instance that I had in mind when I asked the question whether there would not be something in that.

Mr. BLOOMFIELD. Of course, that is a matter which the Navy Department ought to pass on. Personally, outside of the Navy Department, I should not like to see a soldier, as a soldier, detailed to work

as a civilian in competition with civilians unless we have some arrangement to lay down just what the procedure should be and what all this is going to lead to.

Senator NELSON. Are you a member of a labor union?

Mr. BLOOMFIELD. No, sir.

Senator NELSON. Do you carry a union card?

Mr. BLOOMFIELD. No, sir.

Senator JONES. If we are going to follow any policy like that, would it not be a good idea to draft everybody into the Army and then distribute them into the different civilian employments?

Mr. BLOOMFIELD. If we are going to have labor conscription, we had better make it 100 per cent and go the whole distance and have everybody on the Government register, so that the Government may decide who shall be foremen and who shall be riveters and who shall be general manager and who shall be cashier. I do not believe we shall have a very great objection on the part of any element in labor if we go the whole distance in a policy of industrial conscription.

The CHAIRMAN. I did not, of course, mean to get into that. I can conceive how there might be a good deal of saving in the use of men at times when, for instance, in coaling a vessel, if it were difficult to get people to handle coal, there would be men on the ship who were perfectly able to pass coal to a vessel. They, as enlisted men, would not be ordinarily called upon to do that, but in case it is difficult to bunker that ship, why not pay the enlisted men a little extra and get them to do the work?

Mr. BLOOMFIELD. Certainly; they should be paid extra. I think of the emergency in the same way that you do, but I do not want a too broad and sweeping application, because I see that then we open up a great many other things.

Senator NELSON. What other things do you refer to?

Mr. BLOOMFIELD. The labor situation in general.

Senator NELSON. As applied to such a case—is that what you mean?

Mr. BLOOMFIELD. If it becomes an unregulated exemption——

Senator NELSON. Do you mean this—there is no need of beating around the bush——

Mr. BLOOMFIELD. I am not beating around the bush.

Senator NELSON. Do you not mean this: That they will not allow a man who belongs to one trade to do any work that belongs to another trade. Is that not what you mean?

Mr. BLOOMFIELD. That is what I mean.

Senator NELSON. That is one of the rules of the union that is in your mind?

Mr. BLOOMFIELD. Yes, sir.

Senator NELSON. That you have taken all this time to come and tell us?

Mr. BLOOMFIELD. I was trying to give the causes back of that ruling.

Senator JOHNSON. Mr. Bloomfield, you are a resident of Boston?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. For how many years, please?

Mr. BLOOMFIELD. Seventeen or eighteen years.

Senator JOHNSON. Up to what period of time?

Mr. BLOOMFIELD. September 11.

Senator JOHNSON. Of this year?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. And in Boston you were engaged in certain specific work, were you not, somewhat akin to the work you are doing now?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. For how long a period?

Mr. BLOOMFIELD. Practically as long as I can remember, about 16 or 17 years. I have been interested in these social industrial problems; for fully 7 years I have been very directly associated with the employment management problems.

Senator JOHNSON. Are you familiar with the firm of Stone & Webster, of Boston?

Mr. BLOOMFIELD. I know them only by reputation.

Senator JOHNSON. Can you tell us anything about them, please? I am not asking for a detailed statement as to individuals, but has it a very large contracting establishment?

Mr. BLOOMFIELD. Yes; it is a very large and very well-known engineering, construction, and operating company.

Senator JOHNSON. Is it still operating in the city of Boston?

Mr. BLOOMFIELD. I believe its headquarters are still in a very extensive suite of offices in the down-town section of Boston.

Senator JOHNSON. And they are still doing that contract work, are they not?

Mr. BLOOMFIELD. Oh, yes. I have seen signs and advertisements of Stone & Webster construction contracts, and I have been in cities where the public utilities were operated by them.

Senator JOHNSON. Are you familiar with the fact that Stone & Webster were one of the fundamental associations which formed the International Co.?

Mr. BLOOMFIELD. So I have heard.

Senator JOHNSON. Many questions have been asked concerning labor, wages, and the like. I call your attention to some of the wages that are now paid by the United States Government to the various gentlemen who have been connected with this extensive contracting firm. I notice in the record here W. Goodenough——

The CHAIRMAN. What page?

Senator JOHNSON. Page 247. "Mr. W. Goodenough, general manager, $2,083.33 per month." "C. M. Clark, assistant to general manager and assistant secretary to corporation, $541.67 per month"; "L. E. Eustis, assistant to general manager, executive assistant, $550 per month"; and you will observe the notations opposite each name, for instance, opposite W. Goodenough, "Formerly chief engineer with Stone & Webster"; opposite Clark, "eight years with Stone & Webster as secretary of various public-service corporations, recently in New York office"; opposite Eustis, "with Stone & Webster for 17 years on many important jobs," etc. Then, "L. D. Lovekin, consulting engineer, $1,125 per month, chief engineer of New York Shipbuilding Corporation, where he has been for 17 years." Do you know what the New York Shipbuilding Corporation was?

Mr. BLOOMFIELD. I have visited the shipyard.

Senator JOHNSON. It was one of the associations which, with Stone & Webster, formed the International, was it not?

Mr. BLOOMFIELD. I heard it in the testimony here; I did not know it at the time I visited the New York Shipbuilding Co.

Senator JOHNSON. "H. D. Oviatt, transportation manager, $1,250, formerly with New York, New Haven & Hartford Railroad."

Then, farther down, "A. L. Snyder, in charge of interrelations with Shipping Board, $625 per month; with Stone & Webster for 13 years in various capacities," and "A. E. Van Bibber, assistant to general manager in charge of organization matters, $750 per month; two years with Industrial Co., Boston, as executive." What was the Industrial Co., of Boston?

Mr. BLOOMFIELD. I never heard of that.

Senator JOHNSON. Do you know whether it was one of the interrelated corporations with Stone & Webster?

Mr. BLOOMFIELD. I never heard of that, Senator.

Senator JOHNSON. Now, as you will observe, these salaries of this organization that is yet doing its contracting business, salaries are being paid by the United States Government to-day, in addition to the $6,000,000 or $7,000,000 that are to be paid for the "know how." Have you any particular complaint against the ordinary man that works with his hands or the skilled mechanic for asking an increase in wages?

Mr. BLOOMFIELD. Well, I think we have a problem in that situation.

Senator JOHNSON. Yes; but do you think it is unjust that the man who is a skilled mechanic——

Mr. BLOOMFIELD. It is quite natural to expect it, without attempting to pass judgment on the wisdom of that statement.

Senator JOHNSON. Allow me to read one or two others. I am reading only from the office force now: "D. T. Pierce, publicity manager, $833.33 per month; four years as executive assistant to Barber Asphalt Paving Co," is the particular notation; "Thomas B. Reed, publicity assistant, $500 per month; 17 years with Philadelphia News Bureau," etc.

Senator HARDING. What is a "publicity assistant"?

Senator JOHNSON. I assume you are familiar with publicity departments, are you?

Mr. BLOOMFIELD. Yes.

Senator NELSON. I assume those are exceptionally valuable men?

Senator JOHNSON. I assume so, from the viewpoint of publicity departments of every activity of the Government to-day?

Mr. BLOOMFIELD. As I understand it, Senator Johnson, of course you are touching on a matter that I have absolutely nothing to do with, and I ought not be called for a moment to pass on the wisdom or the policy of the officials who have made that contract and who have done the work, but I feel like saying this: This is the first time I knew of these salaries, but I will say this, it seems to me as a layman—just as an ordinary layman, interested in this general situation—that it was a great stroke of wisdom and foresightedness for the men—and I do not know who is responsible for the Hog Island matter—it must have come along before my time—but it seems to me it must have been a great stroke of foresightedness and courage and

imagination to have taken that swamp there at Hog Island, with an idea of converting it into the greatest shipyard in the world. I have been there——

Senator JOHNSON. I am not going to question the foresightedness, nor the imagination; I do not wish you to think I am criticizing the particular salaries that are paid here. I recognize they are very low, and that they are salaries that are not commensurate with the tremendous efforts and work that is being performed. I have stated that to you, though, for the contrast, because so much has been said here concerning wages of men and skilled mechanics, merely that that contrast might be significant.

Mr. BLOOMFIELD. Yes; and I answered frankly.

Senator JOHNSON. And we might with equal justice deal with both sides of the problem?

Mr. BLOOMFIELD. Yes, sir.

Senator JOHNSON. And see both sides of the picture?

Mr. BLOOMFIELD. Yes, sir.

Senator HARDING. You were talking a little while ago about price fixing. In view of the questions just raised, do you think it would be helpful in developing the manpower if we extended price fixing to salaried forces and the paid agencies of all these institutions?

Mr. BLOOMFIELD. Yes, sir.

Senator HARDING. Including the workmen?

Mr. BLOOMFIELD. Yes, sir.

Senator HARDING. You would go the whole limit?

Mr. BLOOMFIELD. You practically do that in all Government service at all times.

Senator HARDING. I want to ask you another question, and I do not want it misconstrued: I am an employer of eight-hour labor myself, and am heartily in accord with it. You said yesterday you did not believe that men could develop their full efficiency in working a longer period than eight hours. How many of the plants building ships now are working their men 10 hours under an 8-hour agreement?

Mr. BLOOMFIELD. I will give you those figures in a moment, Senator. We would have to get that tabulated for you.

Senator HARDING. Approximately, just in round numbers?

Mr. BLOOMFIELD. I should say that probably more than half of the plants are on over an eight-hour basis.

Senator HARDING. Then, in all fairness, now, if a man can not develop his efficiency in 8 hours' work, ought we to encourage the 10-hour program?

Mr. BLOOMFIELD. We are really trying—we have been trying for some time to get down to a shorter-hour basis in the shipyards.

Senator HARDING. I really think it is an important question, if it is established that men can not work efficiently longer than 8 hours, we are ruining the efficiency of our constructive forces by permitting a 10-hour arrangement under the 8-hour program.

Mr. BLOOMFIELD. We are on an emergency basis. We have not very much choice in our rush and pressure. I hope that, as we go along—and it is my belief that as we go along matters will be so adjusted as to increase the number of shifts and reduce the 10 hours to 8 hours.

Senator JOHNSON. Then, to interject, you can speed up for a brief period without permanent injury, can you not?

Mr. BLOOMFIELD. It is pretty hard to recuperate after 10 hours in the yard and a half hour to an hour going and coming each way.

Senator HARDING. Do not misunderstand me. I am not urging the 10-hour basis. I am wondering if it is not ruining our productiveness?

Mr. BLOOMFIELD. It is a necessary evil, which I hope we will be able to overcome as we go along.

Senator BANKHEAD. Mr. Bloomfield, you have a number of men on the 10-hour basis. You pay then for 10 hours at so much an hour or so much a day, do you not?

Mr. BLOOMFIELD. The way to pay a man for 10 hours, in my judgment, is to pay him for 8 hours, and then time and half after that.

Senator BANKHEAD. I am not asking your judgment. I am talking about what the rule is now. How do you pay them now, men working 10 hours; do they get pay for 10 hours?

Mr. BLOOMFELD. May I respectfully suggest that all questions as to pay and wages, the conditions of payment in the yards be referred to Mr. Blackman and Mr. Piez, as I have nothing to do with that, Senator, and I am loath to enter into that department of work and make answers which you ought to have first hand.

Senator BANKHEAD. All I wanted to know was, if you paid one class of men for 10 hours and paid them so much for 10 hours, and another class you employed for 8 hours and paid them for 10 hours, working 8 hours with pay for 10. And is that not a discrimination?

Mr. BLOOMFIELD. Yes. Oh, yes; the wage schedule——

Senator BANKHEAD. Does that not cause confusion and dissatisfaction?

Mr. BLOOMFIELD. It is a bad thing, and I think we all see in the Government work a tendency to establish wage standards by zones, so as to do away with unequal wage schedules.

Senator BANKHEAD. In accordance with your theory, would it not be best to just pay them all on the basis of working 8 hours and [illegible] them for 10 hours, the whole business, rather than to let part [illegible] pay work for 10 hours and receive pay for 10 hours, and pa[illegible] of them work 8 hours and be paid for 10? [illegible]t of them

Mr. BLOOMFIELD. I think there should be unifor[illegible]nity in the wage scale.

Senator BANKHEAD. Would not they obje[illegible]t to that?

Mr. BLOOMFIELD. No.

Senator HARDING. I think Sena[illegible]or Bankhead has gotten a little misapprehension. According [illegible]o the statement made yesterday some 15 or 16 per cent of the [illegible]ards are working a straight 10 hours.

Senator BANKHEAD. They get paid for 10 hours.

Senator HARDING. Then there is a small percentage of yards working a 9-hour day.

Senator BANKHEAD. I understood that.

Senator HARDING. Then there are some 60 per cent of the yards working on an 8-hour basis.

Senator BANKHEAD. Yes; but they get paid for 10 hours.

Senator HARDING. Let me finish. They work on an 8-hour basis, but they work 10 hours with both time and a half for the two hours

overtime, that is to say, a man who works 10 hours on the 8-hour basis would get paid for 10 hours' work?

Mr. BLOOMFIELD. Yes; eleven and a half hours.

Senator BANKHEAD. That is true if the work is on a 10-hour basis, that changes the whole situation.

Mr. BLOOMFIELD. There is complete data on that subject, but not in my hands.

Senator HARDING. You do think it would be fair to standardaize the whole thing?

Mr. BLOOMFIELD. I think it is necessary as well as fair.

Senator HARDING. I agree myself to that very much.

Senator BANKHEAD. Mr. Bloomfield, is there not somebody who has worked out and who can tell us what the record is about that?

Mr. BLOOMFIELD. Yes, sir.

Senator BANKHEAD. The difference between the payments, what the efficiency is, whether a man working 9 hours under your rule or a man working 8 hours under your rule or a man working 10 hours under your rule, which class of men would you get the best class of work from and which do you regard as the most efficient for the money you pay? You ought to be able to tell that, inasmuch as you have got all these different classes at work.

Mr. BLOOMFIELD. Yes, sir. Mr. Piez, who is a noted production engineer, has made this his special since he has come into the Shipping Board.

Senator BANKHEAD. We would be very glad to hear him on this subject. What I am anxious to know is—and I am not criticising, because I am in sympathy with you and want to help in any way I can—what the effect of this rule is, which class do you get the greatest amount of work from, and which is the most efficient for the amount of money they receive? That is what I would like to have worked out. I am not going to ask you to do it, but I would like to have somebody do it, because I think it would be instructive.

Mr. BLOOMFIELD. It is instructive and very important.

Senator BANKHEAD. I think so.

Mr. BLOOMFIELD. And my opinion is that Mr. Piez and Mr. Blackman have a good deal of material on the subject.

Senator BANKHEAD. Personally, I am in favor of the 8-hour basis.

The CHAIRMAN. Are there any other questions (no response)? Is there anything further which occurs to you, Mr. Bloomfield?

Mr. BLOOMFIELD. No, sir.

The CHAIRMAN. Then, we will excuse you and call Mr. Ferris.

STATEMENT OF MR. THEODORE E. FERRIS, NAVAL ARCHITECT AND ENGINEER, EMERGENCY FLEET CORPORATION, NEW YORK CITY.

The CHAIRMAN. Mr. Ferris, just give the stenographer your full name and your place of residence.

Mr. FERRIS. Theodore E. Ferris, New York.

The CHAIRMAN. What is your present occupation?

Mr. FERRIS. Naval architect and marine engineer.

The CHAIRMAN. How long have you been engaged in that profession?

Mr. FERRIS. Since 1890.

The CHAIRMAN. Where?

Mr. FERRIS. I was apprenticed and a student with the late A. Cary-Smith from 1890 to 1897, and I had a practical experience in the shipyards from 1897 until 1900. Following that I was a chief designer and constructor in a shipyard from 1900 to 1905.

The CHAIRMAN. What shipyard?

Mr. FERRIS. In the vicinity of New York, the Shooters Island Shipbuilding Co., now the Standard Shipbuilding Co., where I have built steel and wooden vessels of various types, including bulk oil ships, Government vessels, wooden vessels, and in 1905 I resumed my work in naval architecture, in partnership with the late A. Cary-Smith, and during the past 12 years, from 1905 to 1917, I designed and supervised the construction, building the hulls, machinery, and equipment of some 70 complete ships of the merchant type entirely.

Senator JONES. Wooden or steel.

Mr. FERRIS. Some steel and some wood, and they ranged in size from 3,000 tons to 10,000 tons capacity. I have here, Mr. Chairman, if I may insert it in the record, a statement of my work, the number of vessels and amount of money involved in the construction of the ships.

Prior to 1917, I designed and supervised the building of some 60 ships amounting to a cost of about $23,000,000. In the year 1917, I had under construction work approximating the value of $17,000,000, and at the present time, ships designed and plans and specifications approved, about a third of the ships designed, and the remainder I have approved and passed on the plans and specifications for the Emergency Fleet Corporation, amounting to about 1,000 ships.

Senator NELSON. What is your position with the Emergency Fleet Corporation?

Mr. FERRIS. I am naval architect and consulting engineer, appointed by Gen. Goethals.

Senator NELSON. And from what time?

Mr. FERRIS. From about the middle of April, I think.

Senator NELSON. This last year.

Mr. FERRIS. Yes, sir; 1917.

The CHAIRMAN. You came to Washington then?

Mr. FERRIS. No; I retained my office in New York and handled the work for the Fleet Corporation and designing the ships, and later on, about September 15, I moved my force to Washington.

Senator NELSON. You are now here with your force?

Mr. FERRIS. I am now here with my force; about three-quarters of the time, Senator. I am in New York a part of the time.

If I may, Mr. Chairman, I would like to put this matter in the record.

The CHAIRMAN. Without objection, that will be done. Have you been the sole architect or the principal architect in connection with this work?

Mr. FERRIS. The sole architect.

Senator JONES. Does that statement disclose what ships were steel and what were wood?

Mr. FERRIS. In that list?

Senator JONES. Yes.

Mr. FERRIS. There are about a quarter of them.

Senator JONES. I say, does the list disclose that?

Mr. FERRIS. I think not.

Senator JONES. If it does not, I wish you would correct the list so as to indicate which ships were steel and which were wood.

The CHAIRMAN. You could add that to the list?

Mr. FERRIS. Yes, sir.

(The statement of vessels designed and constructed referred to by Mr. Ferris was subsequently furnished and is here printed in full, as follows:)

RECORD OF WORK DONE BY THEO. E. FERRIS.

Some of the ocean-going ships ranging from 3,000 to 10,000 tons capacity, of both freight and passenger class, designed and construction supervised by Theo. E. Ferris, naval architect and marine engineer, 80 Church Street, New York City, during the past 8 years.

STEEL SHIPS.

Steamships.	Character.	For whom built.	By whom built.
Brazos	Freight and passenger.	Mallory Line	Newport News Shipbuilding & Dry Dock Co.
Corozal	Freight	Porto Rico Line	Do.
Montoso	do	do	Do.
Lorenzo	do	do	Do.
Isabella	do	do	Do.
Mariana	do	do	Do.
Borinquen	do	Insular Line	Great Lakes Engineering Works.
Grayson	do	do	Do.
Pomeraug	do	do	Do.
Waramaug	do	do	Do.
Ruby	do	American Transport Co.	Do.
A. A. Raven	do	do	Do.
Robt. M. Thompson	do	do	Do.
Lenape	Freight and passenger.	Clyde Line	Newport News Shipbuilding & Dry Dock Co.
Neches	Freight	Mallory Line	Do.
Medina	do	do	Do.
Munamar	Freight and passenger.	Munson Line	Bethlehem Steel Co.
Jalisco	do	Mexican Navigation Co.	Cramps Ship and Engine Building Co.
Coahuila	do	do	Do.
Cauto	Freight	Ward Line	Seattle Costruction & Dry Dock Co.
Panuco	do	do	Do.
Henry R. Mallory	Freight and passenger.	Mallory Line	Newport News Shipbuilding & Dry Dock Co.
Yaque	Freight	Clyde Line	Great Lakes Engineering Works.
Yuna	do	do	Do.
Inca	do	do	Do.
Munsomo	do	Munson Line	Bethlehem Steel Co.
Munplace	do	do	Do.
Munalbro	do	do	Newport News Ship Building & Dry Dock Co.
Philadelphia	do	Clyde Line	Great Lakes Engineering Works.
Norfolk	do	do	Do.
Munrio	do	Munson Line	Bethlehem Steel Co.
P. L. M. No. 4	do	Clinchfield Navigation Co.	Great Lakes Engineering Works.
P. L. M. No. 5	do	do	Do.
Begna	do	do	Do.
Standard ships (6)	do	Standard Ship Building Corporation.	Standard Ship Building Corporation.
Ozama	do	Clyde Line	American Shipbuilding Co.
Carib	do	do	Do.
Sioux	do	do	Do.
Manta	do	do	Do.
Clinch Brook	do	Clinchfield Navigation Co.	Staten Island Ship Building Co.
Clinch River	do	do	Do.
Walter D. Munson	do	Munson Line	Bethlehem Steel Co.
Munisla	do	do	Great Lakes Engineering Works.

Value of the foregoing tonnage approximately $23,000,000.

WOOD VESSELS.

S. S. *Merida*, Red "D" Line.
Wrecking ship, Merritt & Chapman Co.
United States Government dredging ship *Sabine*.
Hospital ship.
Polar ship (not yet building).
Government harbor dredging ship.
Transport *Shooter Island*.
Lighter *Santos*.
Ferry steamer *South Beach*.
Ferry steamer *North Beach*.
Fleet of steamers and barges now under construction.
Harbor tugs and other vessels (do not recall names).

Under construction during year 1917, when I was appointed as naval architect and consulting engineer for Emergency Fleet Corporation. Approximate value, $17,000,000.

Steamships.	Character.	For whom built.	By whom built.
S. S. Oriente	Freight and passenger.	Ward Line	Cramps Ship & Engine Building Co.
Unnamed	do	do	Do.
S. S. Mundelta	Freight	Munson Line	Newport News Co.
Unnamed	do	do	Do.
Do	do	do	Do.
S. S. Clinchfield	do	Clinchfield Navigation Co.	Staten Island Ship Building Co.
S. S. Clinchwood	do	do	Do.
Unnamed	do	Gulf & Southern S. S. Co.	Merrill-Stevens Co.
Unnamed (2)	do	Gaston, Williams & Wigmore.	Great Lakes Engine Works.
Unnamed	do	Magnus Fische	American Ship Building Co.
Standard ships (6)	do	J. Coughlan & Sons	J. Coughlan & Sons.
Unnamed	do	Agwi S. S. Lines	American Ship Building Co.
Do	do	do	Do.
Unnamed (4), (wood)	do	Clinchfield Navigation Co.	Sloan Ship Building & Dry Dock Co.

Ships designed for the Emergency Fleet Corporation, including the passing upon and approval of plans and specifications and all technical matters, approximately 1,000 ships, representing an approximate value of $1,000,000,000.

During my career as naval architect and marine engineer in private practice have been employed and reemployed to design and supervise the building of vessels and carry out contracts for some of the largest ship owners and operators in the United States, among some of which are the following:

Atlantic, Gulf & West Indies Steamship Lines.
Mallory Line.
Clyde Line.
Red "D" Line.
Porto Rico Line.
Ward Line.
Insular Line.
American Transportation Co.
Munson Steamship Line.
Mexican Navigation Co.
Clinchfield Navigation Co.

Have carried on and supervised construction of the greatest number of vessels in the greatest number of yards and greatest number of ships in any one yard than any other person in this country.

The following are some of the yards where vessels have been built under my supervision, with sole responsibility to owners:

Newport News Shipbuilding & Dry Dock Co.
Kelly, Spear Co.
Great Lakes Engineering Works.
Bethlehem Steel Co. Yards.
Cramps.
Seattle Construction & Dry Dock Co.
The American Shipbuilding Co. Yards.
Staten Island Shipbuilding Co.
Merrill-Stevens Co.
J. Coughlan & Sons Yards.

The CHAIRMAN. You say you were engaged by Gen. Goethals to design ships for the Emergency Fleet Corporation?

Mr. FERRIS. Yes, sir; doing the current work of naval architect and consulting engineer, passing on builders' plans, and revising them and approving of the ships.

The CHAIRMAN. Do you have reference to wooden ships?

Mr. FERRIS. Wood ships, composite ships, and steel ships.

The CHAIRMAN. All types?

Mr. FERRIS. Yes, sir.

The CHAIRMAN. Your first work was in connection with the designing of wooden ships?

Mr. FERRIS. That was just previous to Gen. Goethals taking the management of the corporation.

The CHAIRMAN. Can you state, Mr. Ferris, when you completed the Ferris type of wooden ship?

Mr. FERRIS. It was started, I should say, the latter part of April, and I can not say, Senator, exactly, but probably 8 or 10 weeks after that time. The general plans and specifications were completed in something like 10 weeks. I do not remember the exact date. Of course, there are a lot of details which follow, that come along as the ships progress.

The CHAIRMAN. Were any contracts let as early as that?

Mr. FERRIS. Well, now, I do not remember, and would have to refer to papers.

Senator NELSON. It seems to me a contract was let as early as May for wooden vessels.

Mr. FERRIS. It may be possible, Senator.

Senator JONES. The Sloan Corporation contract?

Senator NELSON. Yes.

Senator JONES. Was let in May?

Mr. FERRIS. That may be; I do not recall the exact dates.

The CHAIRMAN. In that case the contract was probably let before you perfected the complete designs and specifications?

Mr. FERRIS. Before I perfected all the details, Senator. You see, we first get out what we call "design plans"—that is, the construction—and that is passed upon by the classification society; and then the framing drawings, and then follows the arrangement plans; they constitute what we call contract plans; and then there are a lots of details such as drawings of all kinds in the fulfillment of the specifications.

The CHAIRMAN. It was a general order to prepare a design for a cargo ship of 3,500 tons, for instance?

Mr. FERRIS. Yes, sir.

The CHAIRMAN. And that was what you attempted to do?

Mr. FERRIS. That was the first work.

The CHAIRMAN. Were there changes made in that design?

Mr. FERRIS. Not in that design. There were changes made in the floor construction of the yellow pine ships building on the Atlantic coast and Gulf.

The CHAIRMAN. Do you remember the first change made in the specifications or design?

Mr. FERRIS. I do not just gather what you have in mind, Senator. The principal change that I understand has been referred to is this floor-timber construction.

The CHAIRMAN. I would like to have a statement from you as to any changes made. For instance, you went on and perfected your plans and specifications, and subsequently there were changes made. The statement has been made here by various people that repeated changes were made, and what I want to get at as near as I can is when was the first change made, either in design or specifications.

Mr. FERRIS. Well, there was no change made in design. When we say "design" we mean form and type; there was no change made in that. After the plans were prepared I got up a timber schedule—a bill of materials, so to speak—for the timber people. There were changes made; we had a conference here in Washington over the sizes of timbers, verifying this schedule, and there were some changes made in that schedule to better conform to the possibility of getting timbers, and the schedule was agreed upon.

The CHAIRMAN. Do you know what that involved?

Mr. FERRIS. Some lengths. For instance, the planking would be called for and the ceiling timbers and keelsons, an average length of so many feet; we reduced the average a little bit, so as to better come in the possibility of producing the timber; at least the yellow-pine people felt that way.

Senator NELSON. A moment ago you used the term, "That was agreed to." Was it agreed to by the shipbuilders?

Mr. FERRIS. No; the yellow pine people.

Senator NELSON. Who were to supply the lumber?

Mr. FERRIS. Who were to supply the lumber?

Senator NELSON. They agreed to it?

Mr. FERRIS. Yes.

Senator NELSON. To the changes that you suggested?

Mr. FERRIS. The schedule had not really been issued then. It had been prepared, and I brought it here for conference with them.

The CHAIRMAN. Do you remember when that was?

Mr. FERRIS. That was, starting April, May—I should say early in June.

The CHAIRMAN. Had this design and plan of yours been passed upon by the American Bureau of Shipping?

Mr. FERRIS. Yes.

The CHAIRMAN. And approved by them?

Mr. FERRIS. Approved and stamped. We always get their approval and stamp on the midship section of a ship. What we mean by the "midship section" is that it gives all the sizes of scantlings, and details.

The CHAIRMAN. The same as Lloyds?

Mr. FERRIS. Yes, sir.

The CHAIRMAN. They passed on it, too?

Mr. FERRIS. The American Bureau of Shipping Classification Society has been in vogue, I think, since 1867, and has had a lot to do with wooden vessels.

The CHAIRMAN. Did they afterwards require changes to be made in any of the schedules or specifications?

Mr. FERRIS. Well, nothing of any great importance; some minor items. For instance, we had in the original construction what we call "filling floors"—that is, timber without butt from bilge to bilge between the main frames. There was some discussion as to

just how far fore and aft to extend that; some arrow points on the plans showing just where they terminated.

The CHAIRMAN. What did they do with reference to that? Did they insist that should be modified?

Mr. FERRIS. Oh, no; they insisted on the filling floors three-fifths the length of the ship, something like that.

The CHAIRMAN. Where did that vary from the original specifications?

Mr. FERRIS. It might have been three or four or four or five frames each, extended fore and aft, something like that.

The CHAIRMAN. Do you know who did that, who recommended that?

Mr. FERRIS. That was under the ruling and classification requirement of the American Bureau of Shipping by their surveyor.

The CHAIRMAN. What surveyor?

Mr. FERRIS. Their wood-hull surveyor.

The CHAIRMAN. Who was he?

Mr. FERRIS. Mr. Lang.

The CHAIRMAN. Is he still surveyor for them?

Mr. FERRIS. Yes, sir; their hull surveyor.

The CHAIRMAN. What are his initials?

Mr. FERRIS. Oh, Frederick Lang.

Senator NELSON. Does this American Bureau of Shipping act in harmony with Lloyds, adopting the same rules?

Mr. FERRIS. Well, I would hardly say that, Senator; no. I do not want to say they are new in wooden shipbuilding. They have had to do with the classification of ships for the Norwegian people on the Pacific coast, and I think Lloyds are very much newer in the work than the American bureau is, because they have been, away back in the days of our Maine wooden ships engaged in classifying those vessels, more what you would term the "yellow-pine" ship or "hardwood" ship. While they do not differ greatly in their classification requirements, Lloyds are more of a steel classification construction society, and have always been known to put in ample timber and ample strength in every direction, plenty of weight.

The CHAIRMAN. You designed them about how many wooden ships, Mr. Ferris?

Mr. FERRIS. I have been following wooden-ship construction for 15 years—I mean in the repair and that sort of thing. I suppose I have made a half dozen ships. At the time I entered the service I had some wooden ships under construction and was quite familiar with the construction situation on the Pacific coast.

The CHAIRMAN. Did you consult any practical wood shipbuilder in making your design?

Mr. FERRIS. Oh yes; yes, indeed. The question came up, I remember, about the planking of these ships, and I conferred with two prominent shipbuilders down in Maine. I believe there has been some question raised lately regarding working the planks.

The CHAIRMAN. Did you consult any practical lumber men in regard to specifications?

Mr. FERRIS. I did; yes; that is, more as to the size and quality of materials, Senator.

The CHAIRMAN. That was before you determined on the real final specifications?

Mr. FERRIS. For material; yes, sir.

The CHAIRMAN. Has the American Bureau of Shipping had to do with any other changes than the ones you suggested?

Mr. FERRIS. No; there was a matter came up, for instance, in the stern post of single-screw ships, and I think we reversed the size of the timber; that is, turned them around from athwartships to fore and aft.

The CHAIRMAN. The directions as to these changes, as suggested by the American Bureau of Shipping, came through Mr. Lang direct to you, did they?

Mr. FERRIS. Oh, no; no, sir; we had some conferences with them that would be confirmed by letter. The manager of the Division of Construction was acquainted with that situation, and I conferred with him.

The CHAIRMAN. Who was he?

Mr. FERRIS. That was Admiral Bowles at that time.

The CHAIRMAN. I mean, what officers of the American Bureau of Shipping did you confer with?

Mr. FERRIS. The chief surveyor, Mr. Sharp, and in some cases with Mr. Taylor, who is the president of the American Bureau of Shipping.

The CHAIRMAN. Have there been any changes enlarging the size of timbers for the frame construction?

Mr. FERRIS. Yes. I should like to make a statement as to that, Senator, if I may.

The CHAIRMAN. Very well.

Mr. FERRIS. In preparing plans and specifications for the standard wood ships instructions were given that they conform to and be built under the classification of the American Bureau of Shipping. The plans for the yellow-pine ships were passed upon, accepted, and approved by that classification society.

The yellow-pine ships were laid down with floor timbers of the usual right and left hand solid double type, with butts, made as large as possible within the limits of yellow-pine timber obtainable. In view of the depth of the regular floors, limited to size of timber obtainable, for the purpose of obtaining additional strength intermediate or filling solid floors extending from bilge to bilge without butts were called for in the construction and passed upon by the classification society, which were regarded from an engineering standpoint as good and proper construction.

A timber schedule for the yellow-pine ships was then prepared, which schedule, as the result of a conference with the yellow-pine people, was somewhat modified in order that all timbers would come within the possibility of the sized timbers obtainable in the yellow-pine district and agreed upon with the Yellow Pine Association, they stating that they could get the sized timbers prescribed. The ships were thus proceeded with and further thought regarding the construction of the vessels dismissed, deeming that the matter had received good and proper treatment, the construction meeting the classification society's requirements and the requirements for the timber as promised.

As time went on difficulty and delay were experienced in getting the large-size yellow-pine timbers. It was self-evident that ultimately at least part of the large-sized timbers would have to come from

the Pacific coast, of Douglas fir. At about that time criticism was made by some of the builders that the ships were not strong enough in the bottom, while the majority of the builders regarded the vessels as entirely satisfactory and properly constructed. This matter was brought before the management of the corporation by the builders. I was requested to look further into the construction, it seemingly being felt that, in view of the criticism having taken place and the vessels being Government property, the utmost should be done for any improvement that could be made for the betterment of the vessels.

The matter that confronted me was twofold: First, to better the ships from a strength standpoint, if this were possible. However, I did not regard this as of any consequence. In fact, the construction as laid down was good and proper and was in compliance with all the requirements in view of the introduction of filling floors without butts. Second, I realized keenly, however, the difficulty of getting the yellow-pine timber—that is, the long-filling floors; and if a change in the construction of the floors could facilitate this matter and expedite the progress of the ships, and further, and quite as important, if timber of interchangeability from Douglas fir to yellow pine, or vice versa, as it might be received at the yards, could be used, it was wise to make the change. The change was agreed upon with the manager of the division of construction and immediately put into effect on October 26, 1917.

Therefore, the facts in the matter are as follows:

First, the change was not made because of lack of strength in the bottom of the ships owing to the construction originally planned. I did not specifically advocate the change, but agreed to it to meet the conditions with which we were confronted.

Second, because of inability to get the filling floor timbers as originally prescribed and the built-up type of floor adopted it was less difficult to obtain the timbers on account of smaller size.

Third, the effect of the change was to establish interchangeability and thereby make possible the use of either Douglas fir or yellow-pine timber.

Fourth, there had been public criticism, and therefore the built-up type of floors in place of the solid type of floors and filling floors originally contemplated was adopted, resulting in some slight increased strength.

Fifth, in order to avoid any delay in making the change, an alternate type of built-up floors was adopted for vessels already proceeded with, thus not making it necessary to destroy any work already gotten out and yet maintaining uniform construction for all vessels. For vessels that had already progressed the original construction with the filling floors is being adhered to.

The facts of the matter, it will therefore be observed, are that the change was inspired as a result of public criticism made, seemingly, by those not knowing or appreciating the value of filling floors without butts; and the change was actually entered into because of a condition to facilitate the obtaining of timber and the interchangeable use of Douglas fir and yellow pine. There has been no change made in the design of the ships, but a change in the floor construction, for the reasons above explained. There has been public mention made that some 700 tons dead-weight capacity was lost by the change

entered into. This, I beg to report, is erroneous. The actual increased weight or loss in dead-weight capacity amounts to about 30 tons.

Senator NELSON. Is that on the whole lot of ships?

Mr. FERRIS. That is on each ship, Senator.

The CHAIRMAN. Admiral Bowles said, however, did he not, that that was on the ground of its strengthening the ship?

Mr. FERRIS. I think he had that view in mind, Senator, more than I had. What confronted me, and what was so self-evident, was that we could not get the yellow-pine timber in these big sizes. These filling floors were 34 feet long and had to be 22 inches deep, and we were not getting them. I had stated to the management that it seemed to be desirable to take steps to order these big timbers from the Pacific coast.

The CHAIRMAN. Where did the first criticism originate with reference to the strengthening of the ship?

Mr. FERRIS. I believe it was made by what they call the "progress committee." I believe it was through them that the criticism came.

The CHAIRMAN. And that criticism was acted on and shared in by Admiral Bowles, was it not?

Mr. FERRIS. Yes, sir; but I knew all about it.

The CHAIRMAN. So the first purpose was to strengthen the ship. I wish you would tell us, if you can, Mr. Ferris, what was the widest timber originally specified.

Mr. FERRIS. Eighteen inches.

The CHAIRMAN. And what is the widest timber called for now?

Mr. FERRIS. Sixteen inches.

The CHAIRMAN. I mean in the whole ship.

Mr. FERRIS. The flitch timbers; that is, the short timbers.

The CHAIRMAN. The widest timber originally specified was how wide?

Mr. FERRIS. I do not remember; something like 28 inches, I think.

The CHAIRMAN. And what is it now?

Mr. FERRIS. Probably the same for the flitches.

The CHAIRMAN. Have you got some as wide as 34 inches?

Mr. FERRIS. Possibly on some of the short flitches used in working around the turn of the bilge; that is, short timbers, 6, 8, or 10 feet long. The difficulty is to get the big long timbers.

The CHAIRMAN. How long was the longest timber originally specified?

Mr. FERRIS. In the specifications for the ship?

The CHAIRMAN. Yes.

Mr. FERRIS. About 55 feet.

The CHAIRMAN. How long is it now?

Mr. FERRIS. I think we cut that to something like 48 feet. We cut about 6 or 8 feet from the average length of the timber.

The CHAIRMAN. Did you regard it as necessary to make these changes?

Mr. FERRIS. Not absolutely necessary, Senator; no, sir. Of course, I was interested by the criticism; and, as they were to be Government ships, I felt that if there was anything that could be done to better them we should do it.

The CHAIRMAN. That was along about October 26, 1917?

Mr. FERRIS. We issued the change on October 26.

Senator NELSON. You did not apply that to the vessels already under way?

Mr. FERRIS. No, sir.

Senator NELSON. You allowed them to go on to completion?

Mr. FERRIS. I think there were, Senator, about four or five ships that had secured these filling floors and fitted them, and they were allowed to proceed. Where the ships had not got the filling floors and had the 18-inch molded depth of frame, we put 12 inches on top of that. For ships where timber had not been cut, we went into the double floors and made them of two timbers, 12 by 12 and 12 by 16. If those timbers came in from the Pacific coast 30 inches deep, everything would be uniform so that we could interchange the timbers.

The CHAIRMAN. Were there any other changes that you required in the specifications?

Mr. FERRIS. I might say that in the timber schedule, Senator, minor changes came up from time to time as there developed difficulty in getting timber, and I think the management made some change in the heart planking. The quality of the timber was altered on the density rule; that is, about 85 to 90 per cent heart. I think there was some change requested by the management for the purpose of making the planking and deck all hard timber. Of course the general situation admitted of minor changes to help the timber situation.

The CHAIRMAN. Did you keep in touch with the supply of timber at the yards?

Mr. FERRIS. No, only in a general way, Senator. I have been most busy in attending getting out the designs and details, and it was not possible to follow that up. Unfortunately I have not been in contact with the work in the field. We have expanded tremendously in a short space of time; we had a big program to handle, and it was difficult to get skilled men to do it. We had an average of almost one set of plans and specifications a day to check up. I feel if I could have been in the field and learned the criticisms of these builders, and talked with them and got in closer contact with them the criticism would not have been made to the extent it was. The criticism was not from the shipbuilders that had been used to building what they call the yellow pine ship, and Maine type of ship, as the Maine builders felt that that ship as originally laid down was all right.

The CHAIRMAN. Now, you think you have got what you call the Ferris type finally settled on as to plan and design?

Mr. FERRIS, Absolutely, Senator; yes, sir.

The CHAIRMAN. So that if any one wants to build a ship of that sort, you are prepared to furnish them all the necessary plans and specifications?

Mr. FERRIS. That has been so for some time.

Senator NELSON. What is the tonnage of that ship?

Mr. FERRIS. Thirty-five hundred tons, Senator.

Senator NELSON. That is dead weight?

Mr. FERRIS. Total dead-weight.

Senator NELSON. What is the gross tonnage?

Mr. FERRIS. The gross tonnage of those ships, I should say, would run approximately from 1,800 to 2,000.

The CHAIRMAN. What other type of ship is the Fleet Corporation building?

Mr. FERRIS. Oh, they have a program now——

The CHAIRMAN. I mean wooden ships, the Hough design. How many of those are they building?

Mr. FERRIS. I think in the neighborhood of 35 or 40.

The CHAIRMAN. Are you building any more of those?

Mr. FERRIS. No, sir; not of late.

The CHAIRMAN. Has the Ferris type been decided upon as the final type?

Mr. FERRIS. The final type of standard ships. In the beginning we accepted the builders' own plans of wooden ships, subject to the approval of the corporation. I think about a quarter of the wooden ships contracted for are from builders' plans.

Senator NELSON. Those are the requisitioned ships?

Mr. FERRIS. No; new construction.

The CHAIRMAN. Do you not think, Mr. Ferris, that a 2,000-ton wooden ship would be a very useful vessel?

Mr. FERRIS. No; I do not, Senator. When we settled on 3,500 tons we felt that that was the minimum size of ship it would pay to operate in ocean service, on account of the large bunker capacity, crew space, and everything. There would not be much left for cargo in over sea service.

Senator NELSON. What was the speed calculated on?

Mr. FERRIS. Ten knots.

Senator NELSON. What is the radical difference between the Ferris type and the Hough type?

Mr. FERRIS. The Hough type is of what we call box-form section; it has practically a square-cornered bilge. The fore-and-aft form is developed in panel shape, but the sides come down square and go that way [illustrating] to make the round form. That is, the round form is developed in steps.

The CHAIRMAN. Did you design the composite ship also?

Mr. FERRIS. No, sir; those were builders' plans, accepted and approved. We made changes and rewrote specifications. In fact, in almost every case where the builders have submitted propositions to us it has been necessary to redraw the specifications.

Senator NELSON. Do you prepare plans and specifications for steel ships also?

Mr. FERRIS. Yes, sir.

Senator NELSON. For the corporation?

Mr. FERRIS. Oh, yes. We have about eight or nine types of steel ships that have been prepared. Some of those have been adopted from builders' plans.

Senator NELSON. What are the tonnage, speed, etc., of your standard type?

Mr. FERRIS. As to steel ships? I will start with the largest. We have a 10,000-ton troop ship—that is, cargo dead-weight. She makes from 16 to 17½ knots. The next we have is a 10,000-ton tanker oil ship; also a 7,500-ton tanker oil ship. We call them tankers.

Then we have an 8,000-ton semicargo and troop ship. That ship is an intermediate cargo ship, and she makes 15 knots. The American International has a contract for 70 of those ships. That is a

class of ship that will be good after the war and is a good ship now; it has good speed and can carry troops.

Senator NELSON. Did you build any troop ships?

Mr. FERRIS. Yes, sir; 70 of those, Senator, are contracted for.

Senator NELSON. What is the tonnage of those?

Mr. FERRIS. Eight thousand tons.

Senator NELSON. What is the speed?

Mr. FERRIS. Fifteen knots. Then, we have a 9,500-ton, 10½ or 11 knot ship. That is a repeat order; what is called the Moore-Scott ship.

Then, there is the fabricated type of ship, 5,000 tons, 7,500 tons, and 9,400. The term fabricated implies getting the steel out in the interior of the country, through bridge shops and industries of that kind. Those ships differ from the ordinary ship by the fact that they have not as much shear; that is, we have eliminated a lot of the crooked work and have increased the depth of the ship and made it straight.

Senator NELSON. Are they flat-bottomed?

Mr. FERRIS. Well, all modern cargo ships have only 6 inches dead rise, you know, on the bottom.

Then, we have a lake type of ship, of 3,300 and 3,500 tons. We also have on the Lakes what we call the spliced ship; that is 5,670 tons.

Senator NELSON. You are familiar with those big ore carriers on the lakes?

Mr. FERRIS. Yes, indeed.

Senator NELSON. Are they fit for ocean service?

Mr. FERRIS. No, sir; they would break in two in ocean service. There is a lot of depth to the length.

Senator HARDING. What do you mean by a spliced ship?

Mr. FERRIS. The idea, Senator, is to get a longer ship. You see, we build the ship about 100 feet longer than the lock size, and we cut that ship in two, take her through the lock in parts, and put her together again.

Senator HARDING. How many of those are you building?

Mr. FERRIS. We have not contracted for any. I built up on the Lakes last year and they took them through, and at Montreal they put them together again.

Senator HARDING. Is that an expensive process?

Mr. FERRIS. That operation of cutting them apart and putting them together again amounts to about $80,000; that means $80,000 of increased cost due to the fact that they are built on inland water. It is certainly a great pity that there is not an outlet from the Lakes for a ship of normal tonnage. You see, the lock size is 261 feet, and these ships are being built up there for ocean service. They are good ocean-going ships.

Senator HARDING. How long are the locks on the Erie Canal?

Mr. FERRIS. I do not know exactly, Senator, about the Erie. The locks of the new canal, I think, are somewhere in the neighborhood of 300 feet long.

Senator HARDING. If the bridges were higher on that canal could we take Lake vessels through there?

Mr. FERRIS. There is the interference of the bridges, and the water also. I think the water is something like 10 feet.

Senator HARDING. Is there not a greater depth than 10 feet in the new canal?

Mr. FERRIS. I have had to do with getting up a fleet of wooden barges for the Erie Canal, and my recollection is that the maximum draft is 10 feet 6 inches. We have to allow a foot and a half of water under the boat; in other words, 12 feet is about the maximum depth.

Senator HARDING. What would be the draft of the hull alone of these spliced ships if they were taken through there?

Mr. FERRIS. They would run about 9 or 10 feet. Of course, they trim by the stern; they draw more water aft than they do forward. When you trim them you immerse the total ship. I should say with that trim accomplished the hulls alone would run about 9 feet.

Senator HARDING. Do you think it would be practicable to build hulls on the Lakes and fit them out in the East?

Mr. FERRIS. Yes. I think the Lakes ought to be used in every way possible, because I must say they are remarkable shipbuilders up there, I mean in producing ships.

Senator BANKHEAD. Then you could get them out all right?

Mr. FERRIS. I do not know, Senator, about the entrance of those canals and conditions of that kind. I am sorry I am not familiar with that water route.

Senator HARDING. Has that ever been investigated?

Mr. FERRIS. I do not think so, Senator; not to my knowledge. I am quite familiar with the St. Lawrence locks and the Welland locks, because we have been through there.

The CHAIRMAN. Do you know the width and depth of that Welland Canal?

Mr. FERRIS. It is 261 feet by 43 feet 9 inches. They go within 3 inches of the lock walls.

The CHAIRMAN. That is the lock?

Mr. FERRIS. That is the lock. They take about 12 feet of water.

The CHAIRMAN. Are there any steps being taken now to widen those locks?

Mr. FERRIS. They have been talking about that for years—the Canadian Government and this Government.

The CHAIRMAN. Mr. Ferris, do you know if there was any delay occasioned in the construction of the wooden ships by the changing of designs or plans or specifications?

Mr. FERRIS. Senator, I can not say as to that exactly. My impression has been that it is not so. The main delay has been due to the nondelivery of material. I am not criticizing anybody; I do not understand there is any contract time for the delivery of the material, but they have not got the timber to progress with. I mean they have got timber they could not use. In this change in the floors we purposely tried to do everything we could not to cause any delay; I mean we accepted what had already been done.

The CHAIRMAN. Has there been any time consumed in changing the designs and specifications furnished by builders after they came to you?

Mr. FERRIS. You mean on builders' plans?

The CHAIRMAN. Yes.

Mr. FERRIS. No; we have tried to be very prompt about that. All specifications prepared by the builders call for approval of the detailed plans by the corporation. It is up to them to prepare the plans, and we check them over and approve them. We have tried to be

very prompt in that work. Of course, if they do not prepare the plans promptly, we can not help it.

Senator NELSON. Many of these contracts for wooden vessels were simply for the hulls, were they not?

Mr. FERRIS. A large number, Senator; yes, sir.

Senator NELSON. When the hulls are completed, then you make contracts with another concern to furnish the machinery?

Mr. FERRIS. To put the machinery in; yes, sir.

Senator NELSON. And put them in running order?

Mr. FERRIS. Well, there are two contracts, Senator. There is a purchase contract for the machinery, boilers, and auxiliaries; and another contract to install that machinery in the ship after the builder is through.

Senator NELSON. In those cases, then, there are three sets of contracts?

Mr. FERRIS. In the hull-only proposition; yes, sir.

Senator NELSON. And then some of the contracts are for complete construction of the vessel, are they not?

Mr. FERRIS. Yes; but rather a small number of the wooden ships.

Senator NELSON. I mean the wooden ships. Only a small number of those contracts are for completed ships?

Mr. FERRIS. Yes; they are principally on the Pacific coast.

Senator NELSON. What proportion of the wooden ships are being constructed on the Pacific coast and what proportion on the Atlantic and Gulf coasts, as nearly as you can get at it?

Mr. FERRIS. Well, something like three-fifths, I think, or a little over half, on the Atlantic coast and Gulf coast and a little less than a half on the Pacific coast. That is my impression.

Senator NELSON. Now, Mr. Ferris, you are familiar with these shipbuilding contracts in general and what progress has been made with both wooden and steel ships, and of course you are anxious to expedite the work as much as possible——

Mr. FERRIS. That is the only thought I have had.

Senator NELSON. What suggestions can you make to us here as legislators? What can we do to help you expedite the work? What is needed?

Mr. FERRIS. As I see the situation, Senator, the two main things are labor and material.

Senator NELSON. Is there any difficulty in securing material promptly?

Mr. FERRIS. Oh, there has been right along, but we think we are overcoming that.

Senator NELSON. Have you got it fairly overcome now?

Mr. FERRIS. Well, I believe there is timber due here now from the Pacific coast that was only ordered six or eight weeks ago. I think the timber situation will in general be cleaned up all right, but we have got to get these engines built and these auxiliaries ready to go in the ships.

Senator NELSON. But you were delayed somewhat in the construction of wooden ships, were you not, on the Pacific coast and the Gulf coast, because of lack of lumber?

Mr. FERRIS. Principally on the Gulf coast and Atlantic coast, Senator. I do not understand there was any delay on the Pacific coast. Nature provides them out there with fine timber.

Senator NELSON. Where have you been delayed in securing material for your steel ships?

Mr. FERRIS. I do not know that there has been any great delay in that. Of course, I do not know all the arrangements made with the steel corporation and the allied interests to furnish that steel. I know that in the early part of the steel-ship building program I had several conferences with the steel people with the idea of minimizing waste and getting uniformity of rolling and several things of that kind, and they said that would increase their output some 15 per cent. We have not been able to carry that through altogether.

Senator NELSON. Have any of the steel mills been embarrassed by the lack of coal in furnishing new material?

Mr. FERRIS. I could not answer that, Senator; I do not think so. I do not know really about that phase.

Senator NELSON. And there has been lately no real shortage or difficulty in securing material for steel ships then?

Mr. FERRIS. I think there has been some, Senator.

Senator NELSON. But the situation is mending?

Mr. FERRIS. Well, that is my impression.

Senator NELSON. Has there been difficulty in securing the necessary labor?

Mr. FERRIS. I do not think there has been a great deal up to date, but that will probably get very much worse later on, because to build all the ships scheduled is going to take a tremendous force of men.

Senator NELSON. That will be a great problem?

Mr. FERRIS. I think the two main branches of the tree are labor and material. If those can be supplied, the responsibility is then upon the shipbuilders—the job is up to them.

Senator NELSON. In view of the fact, Mr. Ferris, that it is going to take practically all our ability to furnish the material and the labor, would it not be wiser to apply all that material and labor to existing contracts instead of taking on new contracts?

Mr. FERRIS. Yes, sir; and to expand the present yards that can produce. The way I look at it is this, that the people that are producing ships—that are delivering the goods—those are the fellows that ought to get the increased orders.

Senator NELSON. Yes; but I am speaking of establishing new yards or new plants.

Mr. FERRIS. Increase the present plants and help the fellow that proves he can do the work.

Senator NELSON. Your idea is that, where yards are in operation and can do the work, if any more work is to be given out it should be given to those yards?

Mr. FERRIS. As a general proposition, Senator; yes, sir.

Senator NELSON. Instead of establishing new yards or new plants?

Mr. FERRIS. Decidedly so. As I have watched the history of new yards——

Senator NELSON. Tell us the history of the new yards.

Mr. FERRIS. As I have watched it, it usually takes about twice as long to build a yard as they think it will, and when they are trying to build ships at the same time, it takes about twice as long to build the ship as they thought it would; and, on top of that, the ship costs about three times as much as they thought it was going to cost.

Senator NELSON. It delays the building of the yard and the building of the ship, and it increases immensely the cost of both the yard and the ship?

Mr. FERRIS. That is it, exactly. They are trying to do too many things that they do not know how to do.

Senator NELSON. So it is a very wasteful method to pursue, is it not?

Mr. FERRIS. That is my view, Senator, and has been right along.

Senator HARDING. Mr. Ferris, are you familiar with the progress of the work of fitting out these ships with boilers and engines and other necessary machinery?

Mr. FERRIS. In this way, Senator; I know that the engines have been contracted for at various engine builders; in fact, all of that has been contracted for.

Senator NELSON. For all these ships?

Mr. FERRIS. For all the wooden ships, in fact for all ships; yes. The progress that is being made with the engines and boilers and auxiliaries for the wooden ships, I do not know. I believe there are some reports; but just what the verification would be in the field where the actual work is being done, I can not say, because I have not been in the field to look around. I do not know what has been accomplished; but you know a contractor's promises are one thing, and his deliveries are another.

The CHAIRMAN. With reference to some delays that you said happened in the South on account of the lack of material, do you remember the extent of that delay?

Mr. FERRIS. I suppose, Senator, for the wooden ships building on the Gulf and Atlantic coasts the yellow-pine ships not on the Pacific coast, where they have the fir ships—I suppose on account of lack of delivery of material and other things there have been from two to three months lost on those ships.

The CHAIRMAN. That is your estimate of that, is it?

Mr. FERRIS. Say two and a half months.

The CHAIRMAN. By reason of inability to get material?

Mr. FERRIS. Mainly that, Senator; yes. In fact, I might say solely.

The CHAIRMAN. Do you know the cause of that? The timber is there, is it not?

Mr. FERRIS. That is due to the difficulty of getting the big timbers. You see there is no use having planking and decking and small timber in the yard when you want to lay your keels. What you want first is the big timber, and that they have not been able to get as quickly as the small timber, and so they have not beeen able to progress on the ships. The yards have an immense lot of the smaller timber stowed away.

The CHAIRMAN. Was that caused in part by requiring such a great output of pieces instead of allowing a mill to go in and cut the timber as it got to it? It had to reach far out into new timber to get the big trees that it required?

Mr. FERRIS. Yes. You see the big trees, Senator, are scattered. They are there, to be sure, but they are scattered and you have to cut your way to them; you have to cut the small timber before you can haul them out.

Senator NELSON. Are you acquainted with this Hog Island shipyard?

Mr. FERRIS. Only as I know the contractors and know the general location. I have never been to the property, Senator, and I do not know the layout except that I understand it is an immense area.

Senator NELSON. They have not commenced building ships, have they?

Mr. FERRIS. What they are doing, as far as I know, is perfecting their detailed drawings and ordering the fabricated material. They are fabricated ships, you know.

Senator NELSON. I mean they have not laid any keels as yet in their yards?

Mr. FERRIS. No, sir.

Senator NELSON. That yard, in fact, is not all completed as yet, is it?

Mr. FERRIS. Not by a long shot; no, sir.

Senator NELSON. Do you know how long it will take to complete it?

Mr. FERRIS. I do not know about that. I should say it might take them nine months or a year.

Senator NELSON. When can they first turn out any ships?

Mr. FERRIS. I do not know.

Senator NELSON. Can they turn out any within the first six months?

Mr. FERRIS. No, sir.

Senator NELSON. Can they turn out any within nine months?

Mr. FERRIS. I doubt it, Senator. You may get some ships the last quarter of 1918.

Senator NELSON. They could possibly turn out a ship or two by the end of this year?

Mr. FERRIS. Yes. When they get the thing coming along right and the wheels turning the ships, of course, will come through faster.

Senator JOHNSON. Senator Nelson, let me call your attention to the second contract with them. I think that provides that in September of this year—1918—a certain number of ships are to be turned out?

Mr. FERRIS. Something like 50 ships, isn't it, Senator? I think the deliveries are in bunches of 20.

Senator JOHNSON. Yes; 20, 25, and 25, I think.

Mr. FERRIS. They have two types of ships. They have the fabricated slow cargo ship and they have the second contract for 70 15-knot semitroop ships. That means they have two elements to deal with.

Senator NELSON. Which can they complete the most readily?

Mr. FERRIS. Oh, the smaller ship—the 7,500-ton ship.

Senator NELSON. But you must remember, Senator Johnson, the yard is not completed; they have got no ways yet.

The CHAIRMAN. They have to build the yard. Do you pass on the plans?

Mr. FERRIS. Of the yard? No, Senator. In fact, I have never seen them.

Senator NELSON. And no matter what the contract is, I do not see how they can get the ships out by that time.

Mr. FERRIS. They may surprise us all. Of course, the best way to judge the future is by the past, and as I have seen yards built in

Senator NELSON. It delays the building of the yard and the building of the ship, and it increases immensely the cost of both the yard and the ship?

Mr. FERRIS. That is it, exactly. They are trying to do too many things that they do not know how to do.

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Senator HARDING. Mr. Ferris, are you familiar with the progress of the work of fitting out these ships with boilers and engines and other necessary machinery?

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Senator NELSON. For all these ships?

Mr. FERRIS. For all the wooden ships, in fact for all ships; yes. The progress that is being made with the engines and boilers and auxiliaries for the wooden ships, I do not know. I believe there are some reports; but just what the verification would be in the field where the actual work is being done, I can not say, because I have not been in the field to look around. I do not know what has been accomplished; but you know a contractor's promises are one thing, and his deliveries are another.

The CHAIRMAN. With reference to some delays that you said happened in the South on account of the lack of material, do you remember the extent of that delay?

Mr. FERRIS. I suppose, Senator, for the wooden ships building on the Gulf and Atlantic coasts the yellow-pine ships not on the Pacific coast, where they have the fir ships—I suppose on account of lack of delivery of material and other things there have been from two to three months lost on those ships.

The CHAIRMAN. That is your estimate of that, is it?

Mr. FERRIS. Say two and a half months.

The CHAIRMAN. By reason of inability to get material?

Mr. FERRIS. Mainly that, Senator; yes. In fact, I might say solely.

The CHAIRMAN. Do you know the cause of that? The timber is there, is it not?

Mr. FERRIS. That is due to the difficulty of getting the big timbers. You see there is no use having planking and decking and small timber in the yard when you want to lay your keels. What you want first is the big timber, and that they have not been able to get as quickly as the small timber, and so they have not been able to progress on the ships. The yards have an immense lot of the smaller timber stowed away.

The CHAIRMAN. Was that caused in part by requiring such a great output of pieces instead of allowing a mill to go in and cut the timber as it got to it? It had to reach far out into new timber to get the big trees that it required?

Mr. FERRIS. Yes. You see the big trees, Senator, are scattered. They are there, to be sure, but they are scattered and you have to cut your way to them; you have to cut the small timber before you can haul them out.

Senator NELSON. Are you acquainted with this Hog Island shipyard?

Mr. FERRIS. Only as I know the contractors and know the general location. I have never been to the property, Senator, and I do not know the layout except that I understand it is an immense area.

Senator NELSON. They have not commenced building ships, have they?

Mr. FERRIS. What they are doing, as far as I know, is perfecting their detailed drawings and ordering the fabricated material. They are fabricated ships, you know.

Senator NELSON. I mean they have not laid any keels as yet in their yards?

Mr. FERRIS. No, sir.

Senator NELSON. That yard, in fact, is not all completed as yet, is it?

Mr. FERRIS. Not by a long shot; no, sir.

Senator NELSON. Do you know how long it will take to complete it?

Mr. FERRIS. I do not know about that. I should say it might take them nine months or a year.

Senator NELSON. When can they first turn out any ships?

Mr. FERRIS. I do not know.

Senator NELSON. Can they turn out any within the first six months?

Mr. FERRIS. No, sir.

Senator NELSON. Can they turn out any within nine months?

Mr. FERRIS. I doubt it, Senator. You may get some ships the last quarter of 1918.

Senator NELSON. They could possibly turn out a ship or two by the end of this year?

Mr. FERRIS. Yes. When they get the thing coming along right and the wheels turning the ships, of course, will come through faster.

Senator JOHNSON. Senator Nelson, let me call your attention to the second contract with them. I think that provides that in September of this year—1918—a certain number of ships are to be turned out?

Mr. FERRIS. Something like 50 ships, isn't it, Senator? I think the deliveries are in bunches of 20.

Senator JOHNSON. Yes; 20, 25, and 25, I think.

Mr. FERRIS. They have two types of ships. They have the fabricated slow cargo ship and they have the second contract for 70 15-knot semitroop ships. That means they have two elements to deal with.

Senator NELSON. Which can they complete the most readily?

Mr. FERRIS. Oh, the smaller ship—the 7,500-ton ship.

Senator NELSON. But you must remember, Senator Johnson, the yard is not completed; they have got no ways yet.

The CHAIRMAN. They have to build the yard. Do you pass on the plans?

Mr. FERRIS. Of the yard? No, Senator. In fact, I have never seen them.

Senator NELSON. And no matter what the contract is, I do not see how they can get the ships out by that time.

Mr. FERRIS. They may surprise us all. Of course, the best way to judge the future is by the past, and as I have seen yards built in

this country, if they can build that yard within nine months or a year they are going some. Let us hope they will.

Senator NELSON. From your experience in building yards and building ships, you do not believe they can turn out any ships this year, do you?

Mr. FERRIS. I would not say that, Senator; I think it is possible to get a few ships this year.

Senator NELSON. It is a possibility?

Mr. FERRIS. Yes, sir.

Senator NELSON. And no more?

Mr. FERRIS. It is a possibility.

The CHAIRMAN. They can probably build ships before they complete the whole yard, can they not?

Mr. FERRIS. Yes, indeed.

The CHAIRMAN. And they can start on this second contract?

Mr. FERRIS. Yes; they will have a lot of work.

Senator NELSON. But they will have to lay the keels and they must have the ways.

Mr. FERRIS. I do believe when they get it going and have the wheels turning they may surprise us. You see, the great thing in a shipyard is a repeat order. The shipbuilders like duplicate orders. When they once get things moving they will probably surprise everybody.

The CHAIRMAN. Do they have to fill any there?

Mr. FERRIS. I think they do some, Senator, as I understand it.

Senator NELSON. There is a swamp or marsh there.

Mr. FERRIS. That means considerable fill, considerable piling.

Senator NELSON. There are two yards on the Pacific coast—Senator Jones, you can name them—where they had contracts to build the yards. Are you familiar with them?

Senator JONES. One was the Grant Smith-Porter-Guthrie Co., of Portland, Oreg., and the other was Sanderson & Porter, at Willapa Harbor, Wash.

Senator NELSON. Are you familiar with those cases?

Mr. FERRIS. Not in detail, Senator.

Senator NELSON. Those are cases where there were no yards and they had Government aid in building the yards. You are not familiar with them?

Mr. FERRIS. No, sir.

Senator NELSON. Let me ask you another thing. Is it not possible to build wooden ships more quickly than steel ships?

Mr. FERRIS. I think so, Senator, all things being equal, if they can get the timber and fastenings and everything.

Senator NELSON. Assuming the labor and material are there, isn't it possible to build them quicker?

Mr. FERRIS. I think so, in the main; yes, sir.

Senator NELSON. When the material and labor are there and the ways are there, how long should it take them to build a ship?

Mr. FERRIS. You mean just the hull?

Senator NELSON. Yes.

Mr. FERRIS. The ship carpenters' work?

Senator NELSON. Yes.

Mr. FERRIS. With the material and labor and everything in good shape, I should think they would put one of those hulls overboard in five or six months.

Senator NELSON. How long would it take to install the machinery and get it afloat?

Mr. FERRIS. Things are a little different with the wooden-ship builder. He is not a machinist, not an engineman. He does not understand putting machinery in a vessel like a steel-ship builder does, and it usually takes a whole lot longer time.

Senator NELSON. Where he has simply the contract for building the hull, who has charge of installing the machinery? That is a different concern, is it not?

Mr. FERRIS. Yes, sir; another contractor.

Senator NELSON. And then another contractor manufactures that machinery?

Mr. FERRIS. Yes, sir. Assuming that machinery is ready to go in the ship, the work of installing could be accomplished, I should think, in 45 or 50 days.

Senator NELSON. Does the Emergency Fleet Corporation provide for securing that machinery and equipment?

Mr. FERRIS. Yes.

Senator NELSON. You provide for that?

Mr. FERRIS. That is all contracted for.

Senator NELSON. You look after that, and you also provide for installing it?

Mr. FERRIS. It is a separate contract; yes, sir.

Senator NELSON. Do you have inspectors watching the work of preparing the machinery, and do you have inspectors watching the work of installation?

Mr. FERRIS. As I understand, Senator, that does not come under me. I have no jurisdiction in that. But of course that would have to be. There are two inspections; there is the classification society, under whose classification we construct these ships, and in addition to that is the owner's inspection; that is, the corporation's.

Senator NELSON. But the corporation has inspectors on the ground watching the work as it progresses?

Mr. FERRIS. Yes, sir.

Senator NELSON. Just as you would in the case of the erection of a large building?

Mr. FERRIS. Yes, sir; and in the building of this machinery.

Senator NELSON. And then you inspect the installation of the machinery and equipment?

Mr. FERRIS. Yes, sir; and run a trial trip and test it all out.

Senator NELSON. Is there any difficulty in securing the equipment—that term may not be correct—for these wooden ships as rapidly as the hulls are completed?

Mr. FERRIS. I can not answer that, except in this way: I have seen the reports, and everything seems to be going along well. There is, of course, the difference between a contractor's promise and his delivery. If a man who was able to judge what a shop could do could get out in the field and investigate that, that would be the real way to judge the situation.

Senator NELSON. We are anxious to help you, Mr. Ferris, in expediting this program. You are an expert and know your business full well. Give us what suggestions you can by which we can help you to expedite the work. What ought we to do?

Mr. FERRIS. I think the main thing is the adjustment of labor. The best way to settle that is a big problem. The next is to get materials delivered.

Senator NELSON. But does not that also involve labor?

Mr. FERRIS. It does.

Senator NELSON. Does not that involve labor and transportation?

Mr. FERRIS. Oh, yes, indeed. If you can get the stuff to the builder, he can go ahead and he is not holding up the work and waiting for something else. Then you put the job up to the shipbuilder; he is the man that has got to build the ship. He must be helped.

Senator NELSON. He must be helped in getting material and helped in getting labor?

Mr. FERRIS. Helped in every way, providing he knows his business and is competent and conscientious.

The CHAIRMAN. Mr. Ferris, the installing of this machinery and equipment requires a different kind of mechanic, a different kind of labor, does it not?

Mr. FERRIS. Oh, yes; entirely different.

The CHAIRMAN. And do you not think it would facilitate matters if you had these hulls towed a reasonable distance to a common point and had the machinery put in at that point instead of having each hull completed where it is built?

Mr. FERRIS. Oh, decidedly so, Senator. My first idea of that sort of thing was at the time that Gen. Goethals was in charge. Of course, I was working very close with him on the physical end of the work all along the line, and my thought was that we ought to have what you might call a finishing plant. We might have one or more on the Atlantic coast, and maybe two on the Pacific coast. We could get the materials there, and we could train a crew of men who could handle that work—pipe fitters, machinists, and metal-working men. There is no use standardizing the ships unless you can standardize the work.

Senator NELSON. You would send your completed hulls to those places?

Mr. FERRIS. Send them to those points and have a trained crew of men handle the work.

Senator NELSON. You are at liberty to do that to-day where you have a contract simply for the erection of the hull?

Mr. FERRIS. Yes, sir. Any unit of machinery will fit in any hull. There is no sense in standardizing unless you carry that out.

Senator NELSON. I suppose for those ships that are of the same tonnage you have the same class of engines?

Mr. FERRIS. Absolutely the same. One will fit the other interchangeably. They have the same tail shaft, the same line shaft, and everything is the same.

Senator NELSON. So that practically you have standardized the entire equipment of the vessel?

Mr. FERRIS. Yes. If you did not have that condition, Senator, you would have such a mixture of things you could not get ahead anywhere.

Senator NELSON. And then at these yards, after this equipment had been supplied there, it is simply assembled and put in?

Mr. FERRIS. Yes, sir.

Senator NELSON. I can readily see that if you could do that at a few central points—say, one or two points on the Pacific coast and one or two points on the Atlantic coast—you could expedite the work.

Mr. FERRIS. Yes, sir. That was the original thought, Senator, and I think that is being deviated from to this extent: Instead of having one or two points only, they are getting a number of contractors who are supposed to be responsible to bid on installing the machinery. Instead of having one or two it may be 20 or 30.

Senator JONES. You have no central installing plant?

Mr. FERRIS. No; I understand that is not the plan now.

Senator NELSON. Of course, you could not very well tow these empty hulls any great distance. You could not take them from the Pacific to the Atlantic?

Mr. FERRIS. Oh, no; you could not do that, but you could take them anywhere on the Pacific coast or on the Atlantic coast.

Senator NELSON. And you would have to have the assembling place for Pacific vessels on the Pacific coast, and on the Gulf coast for vessels there, and then on the Atlantic you would have one on the North Atlantic and one on the South Atlantic?

Mr. FERRIS. That was the idea; yes.

Senator NELSON. So that you would have five places; two on the Atlantic, one on the Gulf, and two on the Pacific coast?

Mr. FERRIS. Yes, sir; that was the original idea. In fact, that is what I thought would be the best way to expedite the work.

Senator NELSON. You think that would be the best way to expedite the work?

Mr. FERRIS. It certainly would, with a properly trained crew of men to do it.

The CHAIRMAN. Have you abandoned that idea?

Mr. FERRIS. To this extent, Senator. I understand it is going to be split up into a number of plants doing the work. Instead of having 1 or 2 there may be 15 or 20.

The CHAIRMAN. Do you permit the use of the native hardwoods of Maine for these timbers?

Mr. FERRIS. The Society of Classification did.

The CHAIRMAN. I had a letter this morning from a Portland man. The writer says:

> I can find a supply right here within a circle of 50 miles, from 1,000,000 to 3,000,000 feet of A-1 logs, from which timber could be cut according to the schedules—red oak, rock maple, birch, and beech.

Mr. FERRIS. I think they are all all right, Senator, except the red oak.

Senator NELSON. That would never do.

Mr. FERRIS. I am quite sure that the American Bureau of Shipping Classification will accept those timbers.

Senator BANKHEAD. You stated a while ago that the Hog Island plant was building a number of troop ships, didn't you?

Mr. FERRIS. What we call semitroop ships, Senator. They are cargo ships adaptable for troops.

Senator BANKHEAD. Can you tell us about the number of troops one of those ships would carry?

Mr. FERRIS. We are figuring on 1,500 men on one of those ships.

Senator BANKHEAD. Those are 9,000-ton ships, I understand?

Mr. FERRIS. Eight thousand tons, with 15-knot speed.

Senator NELSON. You must remember, Senator, that a ship of that kind carrying 1,500 men could carry a lot of freight in the bottom.

Senator HARDING. How extensive a change do you have to make in the interior of the cargo ship to make it available for troops?

Mr. FERRIS. The space principally used for troops is the tween decks. The troops themselves berth and mess in what we call the tween decks of the ship. The difference between a cargo ship and a troop ship is the additional superstructure, the additional space for the Army officers and the gun crew.

Senator NELSON. In those troop ships don't you have a structure on top of the main deck?

Mr. FERRIS. Yes. Well, you have that in a freight ship. You would increase that, Senator, for a troop ship over a freight ship, say, 20 per cent to get the necessary increased accommodations for the officers due to carrying troops.

Senator JOHNSON. Mr. Ferris, all of the ships that were to be constructed by the International Co. are of the fabricated design, are they not?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. Now, for the fabricated ship what material is delivered at the yard first?

Mr. FERRIS. They get out the keel plates, and then the floors, and what we call the tank-top plating; that is, the double bottom.

Senator JOHNSON. Now, all those parts are manufactured elsewhere than at the yard, are they not?

Mr. FERRIS. Yes; they go along what they call the middle body of the ship——

Senator JOHNSON. I did not make myself clear. I mean, all those parts that finally are assembled into the ship are manufactured elsewhere than at the particular shipyard?

Mr. FERRIS. Yes, sir; under the fabricating program.

Senator JOHNSON. The original designs and specifications are furnished by you to the shipyards, are they not?

Mr. FERRIS. What we call the detailed specifications and the general contract plan, Senator. Then the shipbuilder is required to make detailed working drawings in amplification of the specifications.

Senator JOHNSON. He must build, however, in accordance with the specifications that you furnish?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. And then you furnish, without his interposition at all, the various parts that go into the fabricated ship?

Mr. FERRIS. Well, he contracts for that.

Senator JOHNSON. Do you not furnish them?

Mr. FERRIS. The corporation is furnishing the steel to these people to make them.

Senator JOHNSON. But none of those parts is made by the International Co., but made elsewhere according to your specifications and subsequently delivered at the yards?

Mr. FERRIS. Yes, sir; under their contract "elsewhere" is a subcontractor to them.

Senator JOHNSON. A contract the amount of which you pay?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. Now, when the fabricated portions of a ship come to the shipyard, is there extraordinary difficulty in putting them together?

Mr. FERRIS. Yes, sir; there is considerable work involved. There is a lot of riveting. The riveting in a ship is the great thing; that is the important part of the work. All of this material does not come in entirely riveted; it is riveted in sections, in parts.

Senator JOHNSON. But it comes in large plates, does it not?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. And those plates are made at factories other than the shipyards, and independent of the shipyards, so that they fit together all over the ship, do they not?

Mr. FERRIS. Well, in the case of plates, with the exception of punching these holes in them and driving the rivets and calking the material.

Senator JOHNSON. And when those things come to the shipyard, the shipyard then, upon your plans and specifications and with the parts that have been made elsewhere, puts together the fabricated parts of the ship?

Mr. FERRIS. It assembles the ship.

Senator JOHNSON. Assembles the ship?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. The International Co., therefore, in the case of the 120 ships, is engaged in assembling, according to your plans, and according to the work that has been done elsewhere?

Mr. FERRIS. Yes, sir; that is it.

Senator JOHNSON. The "know how," then, consists in assembling parts according to your specifications and according to the manufacture in some other place?

Mr. FERRIS. Well, in general assembling; yes, sir.

Senator JOHNSON. Now, that is a very different thing from the building of a ship that is built in a shipyard, is it not?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. In addition to that, as Senator Nelson suggested a moment ago, when it comes to the equipment—the "insides" of the ship, if they may be so termed—they are manufactured outside of the shipyard as well, are they not?

Mr. FERRIS. The main units, like engines and boilers and tanks and things of that sort are.

Senator JOHNSON. They are manufactured outside of the shipyard and independently of it?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. And brought to the shipyard?

Mr. FERRIS. And brought to the shipyard, and they have to install them.

Senator JOHNSON. They have to install them; so that in the fabricated ship you have a mode of procedure that essentially is not as

difficult nor as involved as the building of the ship wholly in a shipyard?

Mr. FERRIS. That is correct, Senator Johnson.

Senator JOHNSON. Now, I want to call your attention—because this question of time of delivery is of exceeding importance to us—to the contract found at page 276 of these hearings, being the contract with the American International Corporation. Under this contract twenty-five 7,500-ton cargo vessels are to be delivered in 13½ months from September 13, 1917. That would be, if I am not in error in my calculation, October 28, 1918.

Senator NELSON. By what time?

Senator JOHNSON. October 28, 1918. Now, did I understand you to say, Mr. Ferris, in answer to a question of Senator Nelson's, that that time of delivery can not be met?

Mr. FERRIS. No; I said that I thought the corporation would get some of the ships before the last quarter, or by the last quarter of 1918.

Senator JOHNSON. Well, have you any reason to believe that that delivery will not be made at that time?

Mr. FERRIS. No; I do not.

Senator JOHNSON. I will go a step further and ask you, Is it your opinion that those deliveries will not be made at that time?

Mr. FERRIS. I will qualify it in this way by saying that you may possibly get the first ships in that time. I am doubtful of it.

Senator JOHNSON. You are doubtful as to getting the 25?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. You think there is a possibility, but a remote one; is that it?

Mr. FERRIS. Yes, sir.

Senator HARDING. Is there a penalty for failure to deliver on time?

Senator JOHNSON. No; it is a question of increased compensation or decreased compensation. You may term it a penalty, but it is a premium for speed and a lack of premium for not delivering on time.

Senator HARDING. Well, do not the contracts, as a matter of fact, provide for $25,000 liquidated damages for failure to deliver on time?

Senator JOHNSON. Well, they do provide for so much per day, I believe.

Senator HARDING. Not exceeding $25,000.

Senator JOHNSON. No; I do not think it is that much.

Senator HARDING. I think there is a provision for liquidated damages in the contract.

Senator JOHNSON. Now, in this contract to which I have just referred, the next 25 ships are required to be delivered as follows:

> Twenty-five of the additional 15-knot 8,000-ton dead-weight capacity type hereby ordered are to be delivered within 15 months from September 13, 1917.

That would be December 13, 1918—25 ships. You do not think that will be done?

Mr. FERRIS. No, sir.

Senator JOHNSON. The contract further provides that 25 of 7,500-ton dead-weight capacity type ships are to be delivered within 18½ months from September 13, 1917.

Mr. FERRIS. I think we will get those; I think they will catch up.

Senator JOHNSON. You think they will catch up by that time?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. So that we would have the 75 ships within 18½ months?

Mr. FERRIS. That would be my judgment.

Senator JOHNSON. The contract also provides that the next delivery of 25 vessels shall be within 20 months from September 13, 1917, and the last 20 shall be delivered within 22 months from September 13, 1917.

Mr. FERRIS. It would be my judgment that they will catch up and make the total deliveries pretty nearly on time; but the first ships are going to be behindhand. That is my judgment.

Senator JOHNSON. Are there any other shipyards constructing fabricated ships besides this one?

Mr. FERRIS. Yes; the Submarine Boat Co.

Senator JOHNSON. The Submarine Boat Co. Now, will you tell me again—I have forgotten—the location of each particular yard?

Mr. FERRIS. The Submarine Boat Co. have their yard in Newark Bay, near New York Harbor.

Senator HARDING. Is the Government building a yard there?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. Is it building a yard under like terms as those under which it is building a yard at Hog Island?

Mr. FERRIS. I do not know in detail, Senator Johnson, but that is my understanding of the situation. In other words, they are what is called "agency" contracts. There are three of them—the American International Corporation, the Submarine Boat Co., and the Merchants' Shipbuilding Corporation.

The CHAIRMAN. The Merchants' Shipbuilding Corporation have their yard at Chester, Pa.?

Mr. FERRIS. At Chester; yes, sir.

Senator JOHNSON. Well, then, unfortunately, from your view of it, we will not have any of those ships completed this year?

Mr. FERRIS. That is my judgment of it, Senator Johnson. I want to be perfectly frank about it.

Senator JOHNSON. Well, that is what we want; the anxiety of all of us is to get the earliest possible delivery of ships; our anxiety is for that particular situation.

Mr. FERRIS. And if we fall down on the labor situation or the delivery of materials and things of that kind, the situation will be still worse.

Senator JOHNSON. Where, if you please, are the fabricated parts of the ship—that is, the plates—manufactured?

Mr. FERRIS. Well, the plates are all rolled at the different steel mills. That work is distributed around. The work that is assembled in the fabricated ship—that is, the floor plates, the intercostals, the brackets, and parts that are rivited; that is the fabricated work—that is done at various bridge shops and tank shops in the different States between here and Chicago. I believe the Submarine Boat Co. has something like 25 or 30 shops engaged on that work.

Senator JOHNSON. Because of the interest of Senator McCumber on the subject, he having spoken to members of the committee about it. I will ask you to tell us, if you can, something about the concrete ships.

Mr. FERRIS. Well, I can not tell you a great deal about it, of course. This inflation of shipbuilding—in fact, I never believed before that the American minds were so fertile for devising all kinds of ships. I know that all kinds of things were passed to me to check over and turn down or approve, and a number of propositions came along for concrete ships.

In looking into it in a general way—I did not go into it in detail—I came to this general conclusion, that for a barge intended for inland service or for moderate coast work where the sea would not be too rough, the concrete vessel would probably be successful; but for a self-propelled vessel for ocean service, I did not want to have anything to do with it.

Senator NELSON. Will you allow me to interrupt you with a question, Senator Johnson?

Senator JOHNSON. Yes; certainly.

Senator NELSON. Is it not a fact that, where they started these concrete vessels in Denmark and in Norway, they are a small type of vessel?

Mr. FERRIS. Very small.

Senator NELSON. And they use the Diesel motor, do they not?

Mr. FERRIS. Yes, sir.

Senator NELSON. Yes; instead of having a steam engine, they use what they call the Diesel motor.

Mr. FERRIS. They use the Diesel motor, which is an internal combustion engine.

Senator NELSON. And the first ship constructed of concrete was in Denmark, and then they made one or two of those ships in Norway?

Mr. FERRIS. Yes; but it has not been tried out to any extent at all.

Senator NELSON. It is still in an experimental stage?

Mr. FERRIS. Yes, sir.

Senator NELSON. I saw a man who was interested in the building of one of those ships in Norway, and he came over here looking for a Government job, and he showed me his plan.

Senator BANKHEAD. Would you not say, Mr. Ferris, that a concrete ship would be too rigid—too stiff?

Mr. FERRIS. Yes; I believe that the vibration of the machinery is going to work havoc with that kind of construction; it is going to crack.

Senator JOHNSON. That is, the vibration will destroy it?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. But the concrete construction has made very great advances recently, has it not?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. I presume you know that after the earthquake in San Francisco in 1906, we commenced to construct buildings of reinforced concrete there?

Mr. FERRIS. But you did not have to go to sea and hang her up by the middle with that kind of construction.

Senator JOHNSON. If you had been in that earthquake, I think you would have felt you were in something worse than a heavy sea.

Senator NELSON. I suppose that is why they have the Diesel engine in those concrete ships, to avoid that vibration that you speak of?

Mr. FERRIS. Yes. There is another thing about the concrete ships that is fixed absolutely; they can never be as economical—I mean, getting down to skimmed milk and brass tacks, we have got to carry all the cargo that we can carry, within certain limitations; and we have to have certain limits of machinery. Now, with regard to the concrete vessels, I do not believe that, under the best conditions, they can be built to within 15 or 20 per cent of the weight of a steel ship. Therefore, as the ship and machinery and cargo can only aggregate a certain weight, in the concrete ships you would lose at the very beginning 15 or 20 per cent of the carrying capacity of the vessel.

Senator NELSON. And they are more expensive than the wooden or the steel ships, are they not?

Mr. FERRIS. I do not know about that.

Senator JOHNSON. Well, it is worth while determining whether they can be built, is it not?

Mr. FERRIS. Yes, sir.

Senator BANKHEAD. You are building one concrete ship, are you not?

Mr. FERRIS. I believe we are, Senator Bankhead; we sort of laid down——

Senator NELSON (interposing). I believe that Mr. Hurley, or one of the other gentlemen who appeared before the committee, said that they were building them in a yard in California.

Senator JOHNSON. In one of the western yards they are building a ship, I understand.

Senator NELSON. Yes; they were building one for private account, and the Government, it seems, agreed that they would not commandeer that ship; that is my understanding.

Senator JONES. They have entered into a contract for one, with the condition that if it is a success they will build quite a number—10 or 20, I believe.

Mr. FERRIS. I look upon the proposition in this way, that it is an untried thing. To illustrate, when the wooden-ship question came to the front everybody seemed to have the idea that the wooden ship had to have the internal-combustion engine. Well, I took this position, that no American manufacturer had built an internal-combustion engine, put it in a ship, and made an over-sea demonstration of it.

I remember, when the matter came up, that Gen. Goethals asked me if I was going to pass it. I said, "Only conditionally; that this man will make guaranty of these engines, and if you are willing to accept the ships under this guaranty and make it conditional, I will pass it." He said, "No conditions." I said, "Nothing doing; I will not accept any internal-combustion engines for over-sea work, because they have never been demonstrated."

Now, you can picture the conditions we would have to-day if we had internal-combustion engines in the majority of these wooden ships. You could not get the personnel to run them; in the first place, there would be trouble to build the ship, and then you could not operate them after they were built.

Senator NELSON. They are more ticklish work than running an automobile.

Mr. FERRIS. Yes; we would have an awful time running them.

Senator JOHNSON. Well, when we had the first eight-cylinder engines for automobiles there was a good deal of objection to them; some people said they would rather stick to a Ford car. First, we had the six cylinder, and then the twin six, and so on, and finally they came to the eight-cylinder engine.

I was discussing a while ago this particular contract with the International Co., and you expressed the opinion that we were not likely to get any ships during this year. I want to apply that question now to the other Government yards, the two others that you have mentioned. Is it your opinion that we will get from them the ships this year?

Mr. FERRIS. Well, the Submarine Boat Co., as far as I can judge from the information that comes to me, are the farthest advanced; they have already the keels laid for some three or four ships. In fact, they started in to go ahead with their work before they got the contract; I mean they expected that they were going to get the contract, and they stood to lose if they did not; and in that way they got an early start.

Senator JOHNSON. Where is their plant located?

Mr. FERRIS. At Newark, N. J.

Senator JOHNSON. Do you think they will get any ships before the end of the year?

Mr. FERRIS. Yes; I think they will—the Submarine Boat Co.

Senator JOHNSON. How about the others?

Mr. FERRIS. I think we will get some of the others. I would class the Submarine Boat Co. ahead, the Merchants' Shipbuilding Corporation second, and the International Co. third, in the progress of the work.

Senator JOHNSON. I have not the contracts as to those other companies, so that I can not give you the dates provided for deliveries.

Mr. FERRIS. Of course, if I was out in the yards I could form a more intelligent view of the matter, but I am simply judging from reports.

Senator JOHNSON. Generally speaking, are we far behind in the program, in the time that you expected these ships to be delivered?

Mr. FERRIS. No, not generally speaking, Senator Johnson. I believe if we could shake down labor and get it moving and doing the work and get all the materials and get the shipbuilder on his mettle, that much can yet be done.

Senator NELSON. We are further along in the shipbuilding program, are we not, on these requisitioned vessels?

Mr. FERRIS. Yes; decidedly.

Senator NELSON. And we shall get more speedy relief from that source than from any other?

Mr. FERRIS. Yes, sir. You see, if I may explain, in the start of the steel ships, all that Gen. Goethals seemed to have in his mind was, "Get ships."

And I remember that when we seemed to have the wooden ships started—the contracts were settled; and he wrote me a letter to New York, a very important letter, outlining the program as to how to proceed with the steel ships and get them started. I suppose that he had in his mind that we had to get a lot of designs and have a lot of plans. My thought at the start was to do everything possible to expedite it. But I wrote back to him and said that my views were that

we should accept duplication of what had been built; that what we wanted to get was tonnage that would carry dry and perishable cargo; we did not want any engineer's frills; they are all more or less cranks; but that we wanted to build good ships. And I said that yards should duplicate what they had built for the reason that they would have all the material schedules on hand; they were accustomed to the type of ship, and they could go right off and do something.

Now, the result is that the steel ships that have been launched on the Pacific coast as the result of that program are moving.

Senator NELSON. That is where you let the contracts to existing yards?

Mr. FERRIS. To existing yards, on repeat orders—the duplication of ships.

Senator NELSON. I see; the same style that they were building?

Mr. FERRIS. The same style. They were good enough for foreign owners; they were good enough for our Government.

Senator NELSON. And there is where you got the most rapid results?

Mr. FERRIS. Yes. And I think in eight months there was something like $70,000,000 of steel-ship contracts closed. Now, if we had spent three or four or six months in making plans, it would not have made much difference, no particular improvement, and we would have lost valuable time.

Senator NELSON. And most of those shipyards that were in operation out there were building ships for foreigners?

Mr. FERRIS. For the Norwegians.

Senator NELSON. For the Norwegians and the English, yes.

Mr. FERRIS. And they were pretty strict, and they knew what good tonnage was; and I felt that the wise thing to do, if we wanted what was good and proper tonnage.

Senator NELSON. Have we commandeered some of those ships.

Mr. FERRIS. Yes, sir.

Senator NELSON. And are not some of them ready that we can utilize?

Mr. FERRIS. Oh, yes; we will get a good deal of that tonnage.

Senator NELSON. And there was some English tonnage too, was there not?

Mr. FERRIS. Yes; for the English Government, contracted through the Cunard Line.

Senator NELSON. Was there not some tonnage also on the Delaware River for the English and the Norwegians?

Mr. FERRIS. Yes; the Pennsylvania Shipbuilding Co. had considerable, and in fact, I think most of the yards—well, the Pennsylvania Shipbuilding Co., and, I think, the Chester yard.

Senator NELSON. And there was a little yard at Wilmington, Pusey & Jones, was there not?

Mr. FERRIS. Well, the owning interest in that was Norwegian. Yes; they had a number of them.

Senator NELSON. Mr. Page gave the committee a list of the yards on the Pacific coast. Could you start on the New England Coast and run down the coast and tell us where the various shipyards are located?

Mr. FERRIS. The steel yards?

Senator NELSON. Yes: all the yards building ships.

Mr. FERRIS. There are so many new wooden yards, Senator Nelson, that I do not know.

Senator NELSON. Well, go ahead and start with Maine.

Mr. FERRIS. Well, take the steel yards first. There is the Bath Iron Works, at Bath, Me. I do not think we ought to count them.

Senator NELSON. Was that an existing yard?

Mr. FERRIS. Yes, sir.

Senator NELSON. Have we any contract with them?

Mr. FERRIS. Not that I know of. I can tell you that Bath has a very cold climate in the wintertime, and they rather drifted into building torpedo boats and things of that kind, which they could build under cover.

Senator NELSON. Did they not have a big wooden shipbuilding plant in Maine?

Mr. FERRIS. The Sewell yard. There is a Texas company right near there; they are building cargo ships, and I think there are something like four or five requisitioned ships there; that is at Bath.

Senator NELSON. They are requisitioned ships, but there is no contract let to them?

Mr. FERRIS. No; the owners were building them for their own account.

Senator NELSON. Well, what is the next yard going down the coast?

Mr. FERRIS. Well, we do not get any steel ships——

Senator NELSON (interposing). Until you get down to Piscataqua?

Mr. FERRIS. There is some small place near Boston; then there is New London.

Senator NELSON. There was one up in New Hampshipe, the Piscataqua River, a contract let for a yard that is building ships there above a railroad bridge?

Mr. FERRIS. That is a recent contract?

Senator NELSON. No; it is one of the old contracts here; it is Portsmouth, N. H., I think.

Mr. FERRIS. That is a yard for wooden ships, Senator Nelson.

Senator NELSON. For wooden ships?

Mr. FERRIS. Yes, sir.

Senator NELSON. Could you give us, by to-morrow, a list of the different yards along the Atlantic coast and the Gulf coast, showing which are the steel yards and which are the wooden yards, and showing the yards with which you have contracts and where you have requisitioned ships?

Mr. FERRIS. Yes. Would it help matters if I made a map giving that information?

Senator NELSON. I wish you would make a list; let the committee have something that we can have inserted in the record of the hearings.

Mr. FERRIS. I will be very glad to do that.

(Thereupon, at 5 o'clock p. m., the committee proceeded to the consideration of executive business, and at 5.20 o'clock p. m. adjourned to meet at 10 o'clock a. m. on Friday, January 4, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, JANUARY 4, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 o'clock, a. m. in the committee room, Capitol, Senator Duncan U. Fletcher, presiding.

Present: Senators Fletcher (chairman), Sheppard, Bankhead, Nelson, Jones, Sherman, Harding, Calder, and Johnson.

The CHAIRMAN. The committee will come to order, and Mr. Ferris will continue.

STATEMENT OF MR. THEODORE E. FERRIS, NAVAL ARCHITECT AND ENGINEER, EMERGENCY FLEET CORPORATION—Resumed.

Senator NELSON. Mr. Ferris, I should like to go over all the yards that I asked you about last night.

Mr. FERRIS. Here is a map, Senator, which shows the location of the various yards.

Senator NELSON. I wish you would go on, Mr. Ferris, and name the yards on the Atlantic and Gulf coasts, commencing up in the State of Maine and running south, giving the location of each yard, the capacity of each yard as nearly as you can, and whether the Government has any vessels at those yards either under contract for building or requisitioned. Then you may file that map in connection with your answer.

(The map referred to was filed with the committee.)

Mr. FERRIS. The first one on the Atlantic coast is the Bath Iron Works, Bathe, Me.

Senator NELSON. Are there any Government ships there? When I use the term "Government ships," I mean ships that are being constructed under the Emergency Fleet Corporation, both requisitioned ships and others.

Mr. FERRIS. The Bath Iron Works is a steel yard; no Government ships.

Senator NELSON. Would it be possible to get them to do any building?

Mr. FERRIS. As I understand, they are filled up with naval work.

The Sandy Point Shipbuilding Corporation, in Maine, is a wooden-ship yard.

Senator NELSON. Do they have any Government work?

Mr. FERRIS. They have contracts for wooden vessels.

Senator NELSON. I mean for the Emergency Fleet Corporation, not for the Navy.

Mr. FERRIS. For the Fleet Corporation, not the Navy. They are building wooden hulls.

Senator NELSON. How many?

Mr. FERRIS. That I do not know.

The CHAIRMAN. We have that in another list.

Mr. FERRIS. Then there is George A. Gilchrest, in Maine; they are building wooden hulls for the Emergency Fleet Corporation.

The Kelley Spear Co., Bath Me., is an old established wood building yard. They have wooden hulls for the Emergency Fleet Corporation.

Senator JONES. Are these other two that you referred to old shipbuilding plants?

Mr. FERRIS. No; they are new yards.

Senator NELSON. Are they yards that have been started under the auspices of the Emergency Fleet Corporation?

Mr. FERRIS. The Sandy Point Shipbuilding Corporation is. My recollection is that George A. Gilchrest is an established yard of small capacity.

The Freeport Shipbuilding Co. is at Bath, Me. That, I understand, is a new yard and has wooden ships for the Fleet Corporation.

Then, there is the Portland Ship Ceiling Co., at Bath, Me. That is a new yard for wooden ships for the Fleet Corporation.

Cumberland Shipbuilding Co.; that is in Maine; a new yard, as I understand, for wooden ships, Government work.

L. H. Shattuck (Inc.); that is a wood yard. in New Hampshire, building wooden ships for the Government.

The CHAIRMAN. Will you give the location of each one? Is that at Bath, too?

Mr. FERRIS. That is in Maine—the lower part of Maine.

Gildersleeve Ship Construction Co.; that is a new yard, wooden ships, located in Massachusetts.

Senator NELSON. What I understand by the term "new" yards, Mr. Ferris, is yards that have been inaugurated under the shipbuilding program.

Mr. FERRIS. Yes, sir.

Ship Construction & Trading Co., in Massachusetts; that is a new yard, Government work, wooden hulls.

Groton Iron Works, Noank, Conn.——

Senator NELSON. Haven't you skipped one there on the Piscataqua River, Portsmouth, N. H., between Maine and Massachusetts?

Mr. FERRIS. I beg your pardon, Senator. L. H. Shattuck (Inc.) is at Portsmouth.

Senator NELSON. That is the one on the Piscataqua?

Mr. FERRIS. Yes, sir.

Senator NELSON. That is a wood yard?

Mr. FERRIS. Yes, sir; Government work.

Groton Iron Works, Noank, Conn.; wooden ships, Government work.

Groton Iron Works, a steel yard, in Connecticut, Government work.

The CHAIRMAN. Are both of those new yards?

Mr. FERRIS. Yes, sir. I think in the case of the steel yard, there has been some old plant taken over and increased in size.

The CHAIRMAN. Who are they? Do you know, Mr. Ferris?

Mr. FERRIS. The C. W. Morse interests are in those two Groton yards. They have contracts for both wood and steel vessels.

The Housatonic Shipbuilding Co.; that is in Connecticut; wooden ships, Government work.

Senator NELSON. Is that a new yard?

Mr. FERRIS. Yes, sir.

Senator NELSON. We can use that expression "new yard" for all cases where the yard has been inaugurated by the operations of the Fleet Corporation?

Mr. FERRIS. Yes, sir.

Kingston Shipbuilding Co.; that is in New York, on the Hudson, apparently, judging from this diagram; that is a new yard—wooden ships.

Senator NELSON. Where is it located?

Mr. FERRIS. It would seem to be up on the Hudson River, inland in the State of New York.

Senator NELSON. Between New York and Albany?

Mr. FERRIS. Yes, sir; I judge that from this map.

Senator NELSON. Is that a new yard, too?

Mr. FERRIS. That is a new yard, Government work.

Johnson Shipyards Corporation; that is on Staten Island, N. Y.; new yard, Government work, steel.

Foundation Co.; that is at New York, Newark Bay; a new yard, Government work, wood ships.

Submarine Boat Co., New York, Newark Bay; New Jersey, steel ships.

Traylor Engineering & Manufacturing Co., in New Jersey; a new yard, Government work, wooden ships.

Senator NELSON. What place is that?

Mr. FERRIS. Traylor's.

The CHAIRMAN. Traylor is the name of the man, is it not?

Mr. FERRIS. Yes, sir; it is at Cornwell, Pa.

Senator NELSON. It must be on the Susquehanna, then?

Mr. FERRIS. Yes, sir.

Merchants' Shipbuilding Corporation, Chester, Pa.; new yard, steel ships.

American International Corporation; that is the Hog Island plant; steel ships, Government work. That is a new plant and is in Pennsylvania.

Sun Shipbuilding Corporation; steel ships. That yard has been established some time.

Senator NELSON. Where is that located?

Mr. FERRIS. That has been going about three years. It is at Chester, Pa.

Maryland Shipbuilding Co.; that is a new yard, wooden ships, Government work, located in Maryland.

Henry Smith & Sons Co.; steel ships. That yard has been established some time. That is at Baltimore, Md.

Senator NELSON. Government work?

Mr. FERRIS. Government work; yes, sir.

Potomac Shipbuilding Co.; a new yard, wooden ships, Government work. That is in Maryland, on the Potomac River.

York River Shipbuilding Co.; new yard, wooden ships, Government work.

Senator NELSON. That is in Virginia?

Mr. FERRIS. It must be in Virginia, near West Point; in that vicinity.

Newcomb Life Boat Co.; new yard, wooden ships, Government work.

Senator NELSON. At what point?

Mr. FERRIS. That is in Virginia, near Hampton Roads.

Hampton Roads Shipbuilding & Dry Dock Corporation; a new yard, Government work, steel ships.

North Carolina Shipbuilding Co.; a new yard, Government work.

Senator NELSON. Let me interrupt you there; you must have passed something on the way down. There are two yards here, one at Alexandria and one down here at Quantico. They are building a yard here at Alexandria, I understand, and last fall I went down to Quantico and near there they were building a yard.

Mr. FERRIS. Oh, yes; the Groton Iron Works, at Alexandria.

Senator NELSON. That is a new yard?

Mr. FERRIS. A new yard; yes, sir.

Senator NELSON. And then at Quantico there is another?

Mr. FERRIS. I have omitted, of course, the Newport News Shipbuilding & Dry Dock Co. Everybody knows that yard.

Senator NELSON. But before you get down to that, passing from the State of Maryland into Virginia, we want to locate these two, one at Alexandria and one at Quantico.

Mr. FERRIS. Oh, yes; that is the Potomac Shipbuilding Co. I mentioned that.

Senator NELSON. That is at Quantico?

Mr. FERRIS. Yes, sir.

Senator NELSON. And what is the one at Alexandria called?

Mr. FERRIS. That is the Groton Iron Works.

Senator NELSON. Both of those are for steel ships, or wooden ships?

Mr. FERRIS. The Groton Works, steel ships, and the Potomac Shipbuilding Co., wooden ships, as I understand.

Senator NELSON. And they are new yards?

Mr. FERRIS. New yards, yes, sir.

Terry Shipbuilding Co.—that brings us away down to Savannah, Ga. That is a new yard; composite ships; Government work.

Senator NELSON. Composite ships, you say?

Mr. FERRIS. Yes; wood and steel both.

Senator NELSON. They do not come under the ships you have described as the Ferris type?

Mr. FERRIS. No, sir.

North Carolina Shipbuilding Co.; that is in North Carolina. Morehead City seems to be the location. It is a new yard; wooden ships; Government work.

American Shipbuilding Co., Brunswick, Ga.; a new yard; Government work; wooden ships.

United States Maritime Corporation, Brunswick, Ga.; a new yard; wooden ships; Government work.

Merrill-Stevens Co. There is a wood shipyard under the control of the Merrill-Stevens Co. at Slidell, and that is where they are building

some of the composite ships. Then there is another Merrill-Stevens Co. at Jacksonville.

Senator NELSON. That is an old company?

Mr. FERRIS. An old company; yes, sir.

Senator NELSON. Government work?

Mr. FERRIS. Government work; a steel yard.

Hillyer-Sperring-Dunn Co., Jacksonvile, Fla. That is a new yard, wood ships, Government work.

J. M. Murdock; a new yard, wood ships, Government work.

Morey & Thomas; that is in the vicinity of Jacksonville, Fla.; a new yard, wooden ships, Government work.

That brings us down the Atlantic coast, except that I omitted to mention the Staten Island Shipbuilding Co., an old yard, at Staten Island, N. Y. That is a steel yard, and they have requisitioned ships. I also omitted the Crescent Shipbuilding Co., now a subsidiary company of the Bethlehem Steel Co., at Elizabeth, N. J. Also the Cramp Shipbuilding Co., at Philadelphia; that is an established yard, steel-requisitioned ships and naval work.

Then there is the Maryland Steel Co., now the Maryland plant of the Bethlehem Co., at Sparrows Point, Md.; a steel yard, an old-established yard, requisitioned ships, and some naval work.

I think I mentioned Newport News.

Senator NELSON. You mentioned Newport News, but I think we have not got in the record whether it is work for your corporation.

Mr. FERRIS. Requisitioned ships and naval work; no new contracts. That is at Newport News, Va.

On the Gulf there is the Tampa Dock Co., at Tampa, Fla.; a new yard, wood ships, Government work.

Kelly Atkinson Construction Co.; that is at Mobile, a new yard. They are building composite ships, Government work. They are to be equipped to build steel vessels.

Alabama Dry Dock & Shipbuilding Co.; that is at Mobile. That is a new yard, steel ships, Government work.

Alabama Dry Dock & Shipbuilding Co. also has wood contracts at Mobile. I do not know just how they arranged that.

Murnan Shipbuilding Corporation; that is a new yard, Government work, wooden ships.

Dierks Blodgett Shipbuilding Co., Pascagoula; new yard, wooden ships, Government work.

Hodge Ship Co. (Inc.); that is at Moss Point; new yard, wooden ships, Government work.

The CHAIRMAN. In what State is that?

Mr. FERRIS. In Mississippi, on the Gulf.

Dantzler Shipbuilding & Dry Dock Co.; their headquarters are at New Orleans. That is a steel yard; they have both wood and steel ships.

Then there is the Jahncke Navigation Co. and there is the Jahncke Shipbuilding Co. One is a wood yard and the other is for steel; both Government work, new yards.

Senator NELSON. That must be at New Orleans?

Mr. FERRIS. Yes; that is in New Orleans.

Senator NELSON. Or at Algiers, across the river.

Mr. FERRIS. Union Bridge & Construction Co., Morgan City, La.

Senator NELSON. That is over on Berwick Bay?

Mr. FERRIS. Yes, sir. That is a new yard, wooden ships, Government work.

National Shipbuilding Co.; that is at Orange, Tex.; new yard, wooden ships, Government work.

Southern Dry Dock & Shipbuilding Co., the same locality, Orange, Tex.; new yard, wooden ships.

McBride & Law, at Beaumont, Tex.; new yard, wooden ships, Government work.

Lone Star Shipbuilding Co., Beaumont, Tex.; new yard, wooden ships, Government work.

Universal Shipbuilding Co., Houston, Tex.; new yard, Government work, wooden ships.

J. N. McCammon, Houston, Tex.; new yard, wooden ships, Government work.

Midland Bridge Co., Houston, Tex.; new yard, wooden ships, Government work.

Heldenfels Bros.; that is in Texas, farther down on the Gulf; a new yard, wooden ships, Government work.

That covers the Gulf. Now, on the Pacific coast——

Senator NELSON. We have been over that. We got a pretty good list of those yards the other day from Mr. Page. He did not, however, give us the information you are giving. You might go on and supplement that; you have got the information there, I see. He gave the location of the yards, but he did not give us the information as to what yards are doing Government work, which were new yards, which were wood, and which were steel.

Mr. FERRIS. I think I am generally acquainted with them. I will start at the south and go up.

California Shipbuilding Co.; that is at Long Beach, Cal. That is an old established steel yard, new steel ships, Government work. It also has requisitioned ships.

Los Angeles Shipbuilding & Dry Dock Co.; that is located at Long Beach or in that vicinity.

Senator NELSON. That is not far from Los Angeles.

Mr. FERRIS. That is a new yard, steel ships.

Fulton Shipbuilding Co., at Wilmington, Cal. My understanding is that that is a new yard; wooden ships.

Ralph J. Chandler, Wilmington, Cal.; new yard, wooden ships, Government work.

Western Pipe & Steel Co.; that is near San Francisco and I will have to give that as the location. That is a new yard, steel ships, Government work.

Moore & Scott Iron Works, an old established yard; steel ships, new contracts, and requisitioned ships.

Benecia Shipbuilding Co., Benecia, Cal.; new yard, wooden ships, Government work.

Hammond Lumber Co., Eureka, Cal. That is a new yard, wooden ships, Government work.

Coos Bay Shipbuilding Co.; new yard, wooden ships, Government work.

Senator NELSON. That is in Oregon?

Mr. FERRIS. Oregon; yes, sir.

Kruse & Banks Shipbuilding Co., Oregon; new yard, wooden ships, Government work.

Coast Shipbuilding Co.; new yard, wooden ships, Government work. That is in Oregon.

Supple & Ballin, Oregon; an established yard; composite ships, capable of building steel ships; Government work.

Senator NELSON. That is for composite ships?

Mr. FERRIS. Both, Senator. The ship they are building is a wood ship reinforced with steel. It is not exactly a composite ship, but it is very close to it. They have been established some time.

G. M. Standifer Corporation; a new yard, wooden ships, Government work. That is in Oregon.

Peninsula Shipbuilding Co.; new yard, wooden ships, Government work.

Grant Smith-Porter-Guthrie Co.; new yard, wooden ships, Government work. That is in Oregon.

Senator NELSON. That is at Portland, is it not?

Mr. FERRIS. Yes; right up there near the Seattle district.

St. Helens Shipbuilding Co., in Oregon; a new yard, wooden ships, Government work.

Feeny & Bremer Co., Oregon; new yard, wooden ships, Government work.

Wilson Shipbuilding Co., Oregon; new yard, wooden ships, Government work.

George F. Rodgers & Co., Oregon; new yard, wooden ships, Government work.

McEachern Ship Co., Oregon; new yard, wooden ships, Government work.

Sommarstrom Shipbuilding Co., Oregon; new yard, wooden ships, Government work.

Sanderson & Porter, Oregon; new yard, wooden ships, Government work.

Senator JONES. Are they in Oregon?

Mr. FERRIS. This map indicates they are right on the border.

Senator JONES. I thought they were at Willapa Harbor; that would be in Washington.

Mr. FERRIS. I think that is right, Senator. They are right on the border. That is getting up near Aberdeen; it is well up.

Senator NELSON. That is a new yard?

Mr. FERRIS. New yard, wooden ships, Government work.

Grays Harbor Motor Ship Corporation, Aberdeen, Wash.; an established yard, Government work, wooden ships.

Seaborn Shipyards; that is in Washington; new yard, wooden ships, Government work.

Babare Bros., in Washington; new yard, wooden ships, Government work.

Wrights's Shipyards, Washington; new yard, wooden ships, Government work.

Senator NELSON. You do not know what place in Washington?

Mr. FERRIS. At Tacoma, below Seattle, in the Bay there; not on the coast but inside.

Skinner & Eddy Corporation; an established yard, steel ships, new contracts and requisitioned ships, Government work.

Sloane Shipyard Corporation, Seattle Wash.; new yard, wooden ships, Government work.

Nilson & Kelez Shipbuilding Corporation, Seattle, Wash.; new yard, wooden ships, Government work.

Seattle Construction & Dry Dock Co.; an established shipyard, steel ships, new contracts, and requisitioned ships, Government work.

Meacham & Babcock Shipbuilding Co., Washington; new yard, wooden ships, Government work.

The Union Iron Works, at San Francisco, is an established yard; steel ships, requisitioned ships, Government work. They have no new contracts; they were filled up with naval work.

Senator NELSON. And some work for the English ships that were requisitioned?

Mr. FERRIS. Yes. The situation was that all the old established steel yards were practically filled up with naval work.

Senator NELSON. And partly private contracts?

Mr. FERRIS. Partly private contracts with foreign owners; those are the requisitioned ships.

Senator JONES. Mr. Ferris, are there not at least two other yards there at Seattle that you have not mentioned? The Erickson Shipbuilding Co.?

Mr. FERRIS. You are correct, Senator. That is new.

Senator JONES. They have a big contract?

Mr. FERRIS. They have a contract at Seattle.

Senator JONES. And then there is McDonald?

Mr. FERRIS. Yes; McDonald and somebody.

Senator JONES. Those are two I know.

Mr. FERRIS. Yes; those contracts were entered into quite recently, since this map was made. It seems to me there is one other in Seattle.

Senator JONES. I wish you would look that up when you correct your statement and put that in.

Mr. FERRIS. I am quite sure, Senator, there is another in Seattle—the Ames Shipbuilding Co.

Senator NELSON. The colors on the map simply indicate the districts?

Mr. FERRIS. The districts. You see, the shipbuilding communities on the Atlantic coast, Gulf coast, and Pacific coast are divided into districts, with district officers in charge.

Senator NELSON. That is under your administration?

Mr. FERRIS. Yes, sir.

Senator NELSON. Under the Emergency Fleet Corporation?

Mr. FERRIS. Yes, sir. These colors indicate the districts.

Senator NELSON. How many districts are there?

Mr. FERRIS. There are nine indicated here. There has been a small one added by splitting up the one around Philadelphia, so that there are 10 districts. I have not mentioned the Great Lakes.

Senator NELSON. What yards are there there, if any, that are building for the Government or have requisitioned ships?

Mr. FERRIS. The Great Lakes Engineering Works, of Detroit, Mich.; an old established steel yard, requisitioned ships, Government work. I believe there are under negotiation some new contracts.

The American Shipbuilding Co. has some six or seven yards on the Great Lakes. They have yards at Detroit, Cleveland, Loraine, Chicago, and Wyandotte; the rest of them are engine-building plants. They are old established steel yards, and they have requisitioned ships, Government work, and some new contracts recently closed.

The CHAIRMAN. Who are the American Shipbuilding Co.?

Mr. FERRIS. They are a big concern, Senator, that has been established for years on the Great Lakes; they are the biggest shipbuilding industry on the Great Lakes. Mr. M. E. Farr is president of the company.

Senator NELSON. As to these ships that are being built by the Government or have been requisitioned on the Great Lakes, what is their tonnage?

Mr. FERRIS. They are what we call the lock-size ships. They run about 3,500 tons dead-weight. They have to be within the lock size.

Senator NELSON. Can they go through the Welland Canal?

Mr. FERRIS. Yes, sir; they are built especially for that. I might explain one point about these ships going through the Welland and St. Lawrence locks. They can go out of the Lakes but they can not go back, on account of the way the gates swing in the locks. In other words, the ship is built so big that every inch counts, and those locks have all been measured up very carefully and the last inch has been taken.

Senator NELSON. What is the tonnage?

Mr. FERRIS. Thirty-five hundred tons.

Senator NELSON. Can you get them as big as that?

Mr. FERRIS. Yes, sir.

Senator NELSON. That is dead-weight?

Mr. FERRIS. Dead-weight. We build them as big as 4,000 tons. They are what we call the long-legged type of ship; that is, they have a deep draft. That is the way we get the dead-weight. The Saginaw Shipbuilding Co., at Saginaw, Mich., is a new yard; steel ships, Government work.

There is a wooden shipyard in Sturgis Bay; that is in Wisconsin; a wood ship. That ship was purchased there under construction. They are not building any new ships.

That really covers the Lake situation. On the Great Lakes the American Shipbuilding Co. and the Great Lakes Engineering Works are the two big shipbuilding industries. They have been competitors for years. There are a few other small yards.

The CHAIRMAN. That map may go in the record. We will probably have to reduce the scale and use hatching instead of the colors.

Senator NELSON. Are you through with that, Mr. Ferris?

Mr. FERRIS. I was just going to say, Senator, that on this diagram the red circle indicates the wood, the black circle indicates steel, and the black-in-red circle indicates composite construction.

Senator JONES. What do these colors on the map indicate?

Mr. FERRIS. Those are the different districts.

Senator NELSON. You have a district superintendent or inspector?

Mr. FERRIS. A district officer; yes, sir.

Senator NELSON. Mr. Ferris, do you know whether the Fleet Corporation or the Shipping Board have made any effort to purchase vessels from neutrals?

Mr. FERRIS. Not to my knowledge, Senator.

Senator NELSON. Could they not have secured vessels by purchase from neutrals?

Mr. FERRIS. You mean would it not have been possible to do so?

Senator NELSON. Yes.

Mr. FERRIS. Oh, I imagine it would.

Senator NELSON. At going rates?

Mr. FERRIS. Well, yes. The going rates, of course—what we call "spot tonnage" is very much higher than what we have contracted tonnage for.

Senator NELSON. Do you not think that, owing to the exigencies of the war, it would have been a good plan to get a lot of these neutral ships?

Mr. FERRIS. I believe so; yes, sir. That should have been done. Of course, they could have been got at the spot price per ton.

Senator NELSON. Even under those conditions, would not that have been fully as economical as for the Government to start in and furnish capital for building new yards?

Mr. FERRIS. Yes; I would think so. Of course the amount of tonnage that should have been bought from neutrals would have been more or less limited.

Senator NELSON. It would have been more limited?

Mr. FERRIS. Yes; very much more limited.

Senator NELSON. If you take into consideration what the Government has been advancing toward these new yards in many instances, you could have got ships in the open market at as low a cost as these ships would cost?

Mr. FERRIS. I think that is very probable, Senator. Of course there has been a limited amount of tonnage to obtain, but in order to carry out this immense program that was laid down there seemed to be no other way but to build new yards.

Senator NELSON. But don't you think our shipping program in the present emergency ought to have been expedited by buying or commandeering, if we could, a lot of those neutral ships?

Mr. FERRIS. Yes, indeed. The neutral ships that have been lying idle along the different ports should have been busy.

Senator NELSON. I understand there are upward of a million tons of all kinds of neutral shipping lying in our harbors that have been idle for months and months.

Mr. FERRIS. That is right; waiting for dispatch.

Senator NELSON. Why couldn't you have made efforts to obtain that? Why could not the Shipping Board or the Fleet Corporation have made efforts to obtain some of that neutral shipping?

Mr. FERRIS. I suppose that is a matter of legislation and adjustment. It seems to me that every bit of tonnage should have been secured at all hazards.

Senator NELSON. Does it not seem strange that 1,000,000 tons of shipping should have been lying idle in our harbors here for many months when we are in such urgent need of ships to carry troops and supplies over to Europe?

Mr. FERRIS. Those bottoms should have been busy; there is no question about that.

The CHAIRMAN. Do you know whether any international questions were involved in that?

Mr. FERRIS. I do not, Senator. I could not speak intelligently on that phase of the matter, not being fully acquainted with the legislative and the governmental connections and just how the neutral ships stood—whether it was possible to purchase them.

Senator NELSON. It seems to me, Mr. Ferris, that where these neutral ships have been tied up for months and could not operate, the owners would have been glad to sell them to the Government at a reasonable price. I think there is nothing in international law that would prevent these private owners of neutral vessels from selling them to our Government.

The CHAIRMAN. There is perhaps nothing in the law; but if it were a Dutch ship, for example, would not Germany regard that as an unneutral act on the part of Holland? What effect would that have on Holland in that case?

Mr. FERRIS. A number of those matters probably enter into the situation.

Senator NELSON. But suppose we requisitioned them; then Holland could not be blamed. And if we have not already the power shouldn't we have the power to requisition those neutral vessels that are lying in our harbors?

Mr. FERRIS. It would seem so to me. In other words, in this terrible need of tonnage there should be no ships lying idle.

Senator NELSON. Do you not think, Mr. Ferris, that to meet the immediate wants of the Government at this moment in the way of shipping, the most important thing we could do just now would be to take steps to obtain this neutral shipping, either by purchase or by requisition, and if we need any further legislation. to pass the necessary legislation?

Mr. FERRIS. Yes; if that legislation could be secured that would be one of the quickest turn-overs to get ships. They are simply lying there ready to operate.

Senator NELSON. In principle can there be any difference between requisitioning or commandeering a ship building for a foreigner in one of our yards and taking a ship already constructed?

Mr. FERRIS. It would seem not to me.

Senator NELSON. There can not be any difference in legal principle.

Mr. FERRIS. It is just a difference in the element of time—between the time it takes to build a ship and the time it takes to get a ship that is already afloat.

Senator NELSON. There ought not to be any more legal difficulty in taking a ship that is already afloat than in taking a ship that is partially built in one of our yards?

Mr. FERRIS. From the standpoint of principle, I would say so, Senator.

Senator CALDER. Our treaty obligations, Mr. Ferris, might prevent, however.

Mr. FERRIS. I presume there are considerations of that kind.

Senator NELSON. Treaty obligations have not interfered with our requisitioning. We have not allowed them to interfere with the requisitioning of ships building in our yards.

The CHAIRMAN. It would seem that no real harm or unnecessary risk would come if these ships could be used in the trans-Pacific trade or perhaps in the South American trade. I can understand

how the owners perhaps might not want to charter these vessels if they are to be used in the war zone; but if they are used in the trans-Pacific or South American trade, I see no reason why they should not be willing to charter them.

Senator NELSON. But these vessels that are suitable for troopships and for carrying military and naval supplies over there why could not our Government buy the ships for the use of the Government so as to meet the urgent necessity?

Mr. FERRIS. By purchase, thereby assuming the risk of the loss of the tonnage?

Senator NELSON. Yes. These ships that are building for the Government are to be Government property?

Mr. FERRIS. Yes, sir; we have to take the risk.

Senator NELSON. And the requisitioned ships are all Government property. What is the difference between the Government owning a ship it builds itself and a ship that is requisitioned and the actual ship that is already built?

Mr. FERRIS. No difference in principle.

The CHAIRMAN. Mr. Ferris, do you see any reason why the Emergency Fleet Corporation should not establish this plant, for instance, at Hog Island, and employ people to begin the operation of the plant and to continue the operation of the plant and have the whole thing a Government enterprise operated by the Government?

Mr. FERRIS. I rather think that might become a workable proposition in the course of evolution and adjustment and all that sort of thing; but those corporations and their organizations have been developments of a number of years, and they know how to push things along. Ultimately a plan of that kind could be brought about.

The CHAIRMAN. Could not the Emergency Fleet Corporation have employed the necessary men to push them along at even less salaries than the Government is paying these men?

Mr. FERRIS. I would be rather reluctant, Senator, to think that.

The CHAIRMAN. It looks like the Government ought to be able to get a dredging engineer at $1,000 a month, a general manager at $2,000 a month, a consulting engineer at $1,100 a month, a transportation manager at $1,250 a month, an assistant manager at $1,000 a month, a superintendent of ship assembling at $1,000 a month, an assistant works manager at $1,000 a month, a manufacturing manager of ship construction at $1,250 a month, a manager of purchase at $1,000 a month, a manager of hull fabrication at $1,250 a month, and a manager of machinery fabrication at $1,250 a month—all the heads of the various departments. With those heads of departments already engaged by the Government at those salaries, could they not have organized that plant and carried it on?

Mr. FERRIS. Those same men could. If the Government controlled the shipbuilding industry entirely, and those people had nobody else to work for, it would be possible to get them, but when they are in the open market and there are other shipbuilding industries they will offer them their price and retain their services.

Senator JONES. There is not any other shipbuilding industry now except Government shipbuilding.

Mr. FERRIS. Since the requisitioning took place in August everything has automatically gone to the Government.

Senator JOHNSON. Mr. Ferris, was not this organization gotten together specifically for this particular contract, too?

Mr. FERRIS. Yes; only for this contract.

Senator JOHNSON. Now, if these gentlemen could privately get together for such salaries as these, why could not the Government do it?

Mr. FERRIS. Well, there is that phase of it; the only work they are doing is for this particular contract.

Senator JOHNSON. Did you have anything to do with the making of the original contract?

Mr. FERRIS. No, Senator; I had nothing to do with any contracts.

Senator JOHNSON. In San Francisco, for instance, you have expert division superintendents or inspectors—whatever term you desire to apply—have you not? Men thoroughly familiar with the shipbuilding business——

Mr. FERRIS. As district officers; yes, sir.

Senator JOHNSON. Familiar with the different yards in California, familiar with the capacity of the yards, what they are able to accomplish, and what their future may be, and the like?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. You have ample and absolute confidence in those district officers, have you not?

Mr. FERRIS. They are trusted with the inspection of the work; yes, sir.

Senator JOHNSON. They are experienced men?

Mr. FERRIS. Experienced men; yes, sir.

Senator JOHNSON. If there were any information desired from California or from San Francisco——

Mr. FERRIS. We would depend on them to get it.

Senator JOHNSON. You would absolutely depend on them, would you not?

Mr. FERRIS. Yes, sir.

Senator JOHNSON. You would not depend on any outsider or any politician?

Mr. FERRIS. No, indeed.

Senator JONES. When did you begin your service with the Emergency Fleet Corporation?

Mr. FERRIS. Mr. Eustis, who, I believe, was the agent of the Shipping Board, sent several communications to me in New York, and I finally came to Washington at his solicitation, and we talked over the wood shipbuilding program——

Senator JONES. Who was he?

Mr. FERRIS. I think Mr. Eustis was at that time agent of the Shipping Board, or agent to the Shipping Board. This was before the Emergency Fleet Corporation was established. We talked about the appropriation for wooden ships, the general program, etc., and I suggested steel ships, naturally. I thought that the whole program would be better with steel ships, but wood ships were possible. The wood ships we are building are going to be good wood ships; in fact, with good fit of timber, good fastenings, and good calking, you will have the best wooden ships that can be built. I do not know of any way to make them better.

So that went on, and following that I came to Washington and met Gen. Goethals. The first time I ever met the General was the

day he took charge as manager of the Emergency Fleet Corporation.

Senator JONES. Do you remember what date that was?

Mr. FERRIS. It was on Sunday that I met him here in Washington; I think it was about the middle of April. I know he took charge on Saturday, anyhow. I had made an appointment to meet Mr. Eustis on that Saturday, but, unexpectedly, I met Gen. Goethals.

Senator JONES. Well, I do not want to draw out all of those things. What was the date that you began working for the Emergency Fleet Corporation?

Mr. FERRIS. My recollection is that it was about the 15th of April.

Senator JONES. About the 15th of April?

Mr. FERRIS. Yes.

Senator JONES. And what were the terms of your employment?

Mr. FERRIS. The terms made with Gen. Goethals were that I would design and take charge of the building of wooden ships and be consulting engineer for the fleet corporation—attending to all plans and specifications, prepare plans for steel ships, and, in fact, do all the work that comes under that technical line—at a fee of $2,500 per month, retaining my own office in New York and retaining my clientele; that is, the Government work had preferential consideration, but keeping up my own business. I could not give up my own business at once. Of course, since the requisitioning of the ships, the business has automatically ceased.

I was to be in Washington once or twice a week, and later, when it became necessary, I was to move my staff to Washington. That question was left open to be settled as things developed.

Senator JONES. Now, under that arrangement, if your clients got contracts for ships from the Emergency Fleet Corporation from your design, were you to get a commission or compensation?

Mr. FERRIS. Not on a Government ship; no, sir.

Senator JONES. Well, had you prepared wooden-ship designs before you began work for the Fleet Corporation?

Mr. FERRIS. Well, I have laid down motor ships and four wood steam ships.

Senator JONES. Where were those motor ships to be built?

Mr. FERRIS. They were being built in Seattle; contracted for in Seattle.

Senator JONES. Those four motor ships were being built by the Sloan Corporation?

Mr. FERRIS. I was employed by the Clinchfield Navigation Co. In fact, I had been employed by them on surveying ships, on a lot of ships; they had built some six or eight ships. Ranging back for several years, I was their naval architect and engineer.

Senator JONES. These four motor ships that the Sloan Co. was building in Seattle had been designed by you, and you knew of the contract that they had with the Clinchfield Navigation Co., and that they were building them for that company?

Mr. FERRIS. I had planned these ships for the Clinchfield Navigation Co.

Senator JONES. Yes; I say you knew that they were having them built by this Sloan Corporation?

Mr. FERRIS. I knew that they had a contract with the Sloan Corporation.

Senator JONES. Did you know what the contract was for; did you know the amount?

Mr. FERRIS. No; I knew nothing about that.

Senator JONES. You did not know anything about it at all?

Mr. FERRIS. No; I knew nothing. I had nothing to do with the contract. I only drew the plans and specifications.

Senator JONES. Well, you may not have had anything to do with it; but I just wanted to know whether you knew what the contract called for?

Mr. FERRIS. The contract for the ships?

Senator JONES. Yes.

Mr. FERRIS. No; I did not.

Senator JONES. This plan was substantially what is known now as the "Ferris plan," is it not?

Mr. FERRIS. On those motor ships?

Senator JONES. On those motor ships and the other ships that you had designed.

Mr. FERRIS. No; when the steamships—the ships laid down originally for those people—the steamships were different depth ships, differently proportioned ships; the plans were all gotten out for those ships, and then when they got a contract from the Government I changed those plans over to the plans of the Government ships—made the ships all apply to the Government standard ships for the purpose of getting a standardization; and I made a statement of that to Gen. Goethals.

Senator JONES. And any designs that you furnished to the Government after you began work on the 15th of April, 1917, were Government property?

Mr. FERRRIS. Oh, yes.

Senator JONES. Did you use those designs with your other clients?

Mr. FERRIS. No; I have not. I would not think that would be proper; no, sir.

Senator JONES. You recommended this Clinchfield Navigation Co. to Gen. Goethals?

Mr. FERRIS. I gave the vice president of the Clinchfield Co. a letter to Gen. Goethals; I gave a number of people letters to Gen. Goethals. As I understand, they had those ships contracted for, and I think they had options to build others. I do not know about those details. Anyhow, I felt that they could build ships, and in the effort to get ships I gave them a letter to Gen. Goethals, as I gave several others letters to Gen. Goethals, in the interest of getting ships.

Senator JONES. The Clinchfield Navigation Co. were not building their four motor ships; that was being done by the Sloan Corporation in Seattle, was it not?

Mr. FERRIS. Well, I did not know. I knew that I was employed as architect for the Clinchfield Navigation Co.

Senator JONES. Yes; but you knew that, did you not?

Mr. FERRIS. I knew they had been contracted——

Senator JONES (interposing). Had the Clinchfield Navigation Co. been building wooden ships at all?

Mr. FERRIS. No; those were the first wooden ships they had contracted for.

Senator JONES. Well, why did you recommend to Gen. Goethals that they could build 12 more wooden ships?

Mr. FERRIS. The Clinchfield Navigation Co.?

Senator JONES. Yes.

Mr. FERRIS. Because the Sloan people had a good yard.

Senator JONES. What did you know about it?

Mr. FERRIS. I knew the Sloan people were from the Lake district, and one of the brothers was an experienced shipbuilder.

Senator JONES. Did you know them personally?

Mr. FERRIS. I knew the brothers by reputation.

Senator JONES. Do you know what kind of a yard they had in Seattle?

Mr. FERRIS. I had a general idea.

Senator JONES. Did you get that idea from the Clinchfield Navigation Co.?

Mr. FERRIS. No; I knew that outside.

Senator JONES. Well, why did you not recommend that the Sloan Corporation be given the contract instead of the Clinchfield Navigation Co., and thus have it done directly by the Sloan Corporation?

Mr. FERRIS. I do not know that there was any distinction made.

Senator JONES. Well, did you know or understand that if the Clinchfield Navigation Co. got a contract with the Emergency Fleet Corporation for the building of wooden ships, and if they should let let that contract or turn it over to the Sloan Corporation they would get a commission?

Mr. FERRIS. No; I did not.

Senator JONES. You had no knowledge of that?

Mr. FERRIS. No, sir.

Senator JONES. Did you not know that that was the usual way of doing business of that kind?

Mr. FERRIS. Well, my work with the Clinchfield Navigation Co. had been—they were coal operators; they built ships to contract; they were contractors of ships. I planned and supervised their ships. As far as any relations they had with the Sloan Ship Building Co. are concerned, I had no knowledge of that.

Senator JONES. And they are ship brokers, too?

Mr. FERRIS. You may term them "ship brokers" now. They built ships to handle coal that they had to transport. The Clinchfield Navigation Co. is the subsidiary company of Blair & Co., who own large coal fields. In other words, the Clinchfield Navigation Co. and the Clinchfield Coal Co. operate together, and they built those ships for carrying coal; and then the prices of ships went up, and the market for ships became so great that they sold the ships. But I had never regarded them as ship brokers.

Senator JONES. Well, you understood, did you not, that if they got a contract with the Emergency Fleet Corporation for the building of 12 ships, they would have them built through the Sloan Corporation?

Mr. FERRIS. I assumed that, yes.

Senator JONES. Did you have anything to do with their turning these four Ferris type motor ships over to the Emergency Fleet Corporation?

Mr. FERRIS. Motor ships?

Senator JONES. Yes.

Mr. FERRIS. The motor ships are not owned by the Emergency Fleet Corporation as far as I know.

Senator JONES. Well, I find here in the report of the district officers and the auditor, with reference to the Sloan people, this language:

"No documentary evidence of any kind was on file, but from information gathered, it appears that the Clinchfield Navigation Co. originally contracted with the Sloan Shipyards Corporation for four Ferris type vessels, for $385,000 each, which they later sold to the Emergency Fleet Corporation for $490,000 each, making a profit of $420,000 on this transaction.

Mr. FERRIS. I know nothing about that, sir.

Senator JONES. These four ships—well, the Sloan people had no ships contracted for with the Clinchfield Navigation Co. except those four motor ships that they got for the Emergency Fleet Corporation, had they?

Mr. FERRIS. They had a contract, or option, for ships with the Sloan Corporation as I understood it. Let me explain, Senator Jones. I think you have got the motor ships conflicted with the wood steamships.

Senator JONES. No, I have not.

Mr. FERRIS. The motor ships were different——

Senator JONES (interposing). No, I am just taking this statement here. It says: "These vessels are four of the 16 vessels for which the Sloan Corporation had a contract with the Emergency Fleet Corporation." Now, they had those contracts for four vessels with the Clinchfield Navigation Co., and you recommended to Gen. Goethals, or, rather, suggested this recommendation to Mr. Barnett, that they could build 12 more ships and that would make 16, and it seems, according to the information contained in this report from which I have read, that the Sloan people had a contract with the Clinchfield Navigation people for the building of four ships for the Clinchfield people, at $385,000 each?

Mr. FERRIS. Four wooden ships—steamers.

Senator JONES. Yes; of the Ferris type.

Mr. FERRIS. Pardon me, not of the Ferris type.

Senator JONES. Well, that is stated here in this report by your district officer.

Mr. FERRIS. Well, that is wrong. I laid down, first, four motor ships for the Clinchfield Navigation Co. for the Sloan Corporation, and then I laid down plans for steamers; and when I heard or understood that they had a contract for four steamers I changed the plans of the steamers to what would be termed the Ferris type in order to get a standardization.

Senator JONES. But you made a design originally for those four ships?

Mr. FERRIS. That was a different ship.

Senator JONES. Well, they might just as well be called the "Ferris design" as not, although they are not what is now known as the "Ferris type." But they were built for the Clinchfield Navigation Co.

Senator JOHNSON. I suggest, Senator Jones, that you ask him what was the size of those ships.

Senator JONES. Yes; what was the size of them?

Mr. FERRIS. About the same length and beam, and 2 feet less of depth to be constructed to Lloyds class.

Senator NELSON. What is the difference between a motor ship and a steamship?

Mr. FERRIS. A motor ship is propelled by an internal combustion engine—which I would not recommend for the Fleet Corporation.

Senator NELSON. And these four motor ships were of that type?

Mr. FERRIS. Yes, sir.

Senator JONES. And then there were four steamers also?

Mr. FERRIS. Yes, sir.

Senator NELSON. Afterwards; but they were not of the motor type?

Mr. FERRIS. They were not of the motor type.

Senator NELSON. They were steamers?

Mr. FERRIS. Yes. The first motor ships were laid down to Lloyds classification, and also the second ships, the steamers, were laid down by Lloyds classification.

Senator JONES. What was the tonnage of those steamers?

Mr. FERRIS. About 3,300 tons.

Senator NELSON. May I ask this question for information: Do you understand, Senator Jones, that those four motor ships that Mr. Ferris has referred to were taken over by the Fleet Corporation?

Senator JONES. No; the four steamers were.

Senator NELSON. But they were not the four steamers that were contracted for?

Senator JONES. Yes; these were the four steamers that were contracted for.

Senator NELSON. Not the four motor ships?

Senator JONES. No; the Emergency Fleet Corporation did not get those.

Senator NELSON. Yes; that is what I wanted to bring out.

Senator JOHNSON. Did they not have to finish those motor ships in order to get those particular ways?

Senator JONES. No; they are not finished yet.

Senator JOHNSON. But did not the Fleet Corporation have to undertake to furnish them?

Senator JONES. I do not think so, but Mr. Hurley mentioned when he was here the other day the fact that, of course, the Government will have to see that they are finished now, because they have taken over this yard; they will have to see that they are finished so as to get them out of the way.

The CHAIRMAN. Admiral Bowles stated, I believe, that they would have to get those vessels finished in order to get their own vessels on those four ways that they were occupying.

Senator JONES. Yes; I am asking you these questions, Mr Ferris, in order to give you a chance to explain these things, because if they are not explained, there might be some criticism directed at you, in view of the letter that you gave.

Mr. FERRIS. Yes, I understand.

Senator JONES (continuing). And also to bring out all the facts You knew nothing about it—or did you have anything to do with the sale of those four steamers to the Emergency Fleet Corporation?

Mr. FERRIS. No, sir.

Senator JONES (continuing). At an advance of over $100,000.

Mr. FERRIS. Nothing whatever.

Senator JONES. Did you know anything about the Clinchfield Navigation Co. turning these vessels over to the Emergency Fleet Corporation, or did you make any recommendation that that should be done?

Mr. FERRIS. No; I did not make any recommendation. I knew it had been done. That was the arrangement with Gen. Goethals. When that happened I thought the plans of the ships should all be the same. These ships had not been advanced so far that they could not all be standardized, and I changed all the material over to the standard ships, and I notified Gen. Goethals that that had been done.

Senator NELSON. That included these four ships?

Mr. FERRIS. That included these four.

Senator JONES. And it is further stated in this report "that the Clinchfield Navigation Co. was instrumental in getting for the Sloan Corporation the contract for 12 additional Ferris type vessels, for which service they are to receive a commission of 5½ per cent of the contract price, or $323,400." Now, did you know anything about an arrangement of that sort?

Mr. FERRIS. I had no idea and no knowledge of what arrangement existed between the Clinchfield people and the Sloan people; it did not concern me.

Senator JONES. This was not a matter between the Clinchfield people and the Sloan people—well, of course, the commission part was. But did you not know that it was the general practice, that where a corporation like the Clinchfield Navigation Co. would get a contract for the building of ships and turn it over to some other company to do the actual work, the first-named company would get a commission for doing that?

Mr. FERRIS. No; I never regarded the Clinchfield people, Senator, as brokers. Please let me make that clear: My services to the Clinchfield people were that they were clients of mine as builders of ships—I mean as any owner contracting to build ships. I did not know whether they were contracting to build these ships or whether the Sloan people were contracting to build these ships. I had had absolutely no knowledge of the relations between the Clinchfield Co. and the Sloan Co. I think I can tell you that there were about six or eight ships on the Lakes. The first work on ships that I had to do for the Clinchfield people was the survey of six or eight ships for which they purchased. After that they contracted for four ships, then two ships on the Lakes, four with Staten Island Shipbuilding Co., and they always gave me to understand that they could not get the ships to handle their coal, or the coal of Blair & Co., who, as you know, handle a lot of coal; and they told me that they needed tonnage to transport this coal.

But as the market for ships went up with the inflation for ships, naturally everybody sold ships, and they sold ships, too, but I never regarded them as brokers.

Senator HARDING. Mr. Ferris, before we get away from the subject, you made some changes in these four ships, you say?

Mr. FERRIS. The ships had not really been started. You see, the construction had not advanced very far, and I turned them over to the Government plans—the Government type of ships.

Senator HARDING. Would the changes made in those ships necessitate any such increase of expenditure as $100,000 each?

Mr. FERRIS. Oh, no, indeed.

Senator HARDING. Did the changes necessitate any considerable increase in cost?

Mr. FERRIS. I will tell you what the changes were. The Government ships are 2 feet deeper than other ships, and the Government ships are diagonally strapped, to give additional strength.

Senator HARDING. What additional cost would that impose on them?

Mr. FERRIS. I suppose $25,000. Now, I knew absolutely nothing about the prices arranged between the Clinchfield Co. and the Sloan Co., or about the relation between them or anything of the kind. I always looked on the Clinchfields as being what they were; they built ships as anybody would, and they employed me to look after their interests and to plan and supervise the building of ships.

Senator HARDING. Do you mean they bought ships?

Mr. FERRIS. They contracted the same as any owner would.

Senator HARDING. Or, rather, they contracted to have ships built?

Mr. FERRIS. They contracted to have ships built, not to represent anybody or to have ships sold as brokers. Now, if that was the arrangement between those companies, this is the first time I knew of the Clinchfield people making it.

Senator JONES. Well, have they built ships themselves?

Mr. FERRIS. As builders, no.

Senator JONES. Well, they were not a ship-building company?

Mr. FERRIS. They were ship owners and operators.

Senator JONES. Yes; but not a ship-building company?

Mr. FERRIS. No.

Senator JONES. And if they tried to get contracts for the building of ships that they themselves did not expect to own and operate and that they had built by somebody else, they would naturally expect to get a commission for their services, would they not, and would you not expect them to do so?

Mr. FERRIS. I heard afterwards that they were financing Sloan or interested in some way.

Senator JONES. Well, did you have any talk with the Clinchfield Navigation Co. with reference to their getting a contract for the building of ships for the Emergency Fleet Corporation?

Mr. FERRIS. No; either they or Sloan were negotiating with the Cunard Line. The Cunard Line had started in at that time to build wooden ships. They were negotiating with them, and they made some reference as to whether they could not turn the ships over to our Government. And I thought, rather unconsciously, that it would be no harm to give Mr. Barnett a letter to Gen. Goethals. I do not know that I recommended the building of ships, but it looked to me as if it would be an opportunity for this Government to get wooden ships. Everything then was to "get ships."

Senator JONES. How did you come to suggest 12 ships?

Mr. FERRIS. I did not suggest 12 ships, if I remember correctly.

Senator JONES. I understood that in the letter 12 ships were suggested.

Mr. FERRIS. I think you will find that the records will not show that.

Senator JONES. Will you introduce a copy of the letter that you sent to Gen. Goethals, and that will speak for itself?

Mr. FERRIS. Yes; anything that you desire I will be very glad to make as plain as possible. I gave Mr. Barnett a letter of introduction to Gen. Goethals, and I gave a lot of people letters of introduction to Gen. Goethals in the same way.

Senator JONES. But you had no idea of the number of ships he might get?

Mr. FERRIS. No; I am positive of that.

(The letter referred to was subsequently furnished by Mr. Ferris, and is here printed in full as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 4, 1918.

Senator FLETCHER,
Chairman Senate Committee on Commerce, Washington, D. C.

DEAR SIR: Referring to the request made by Senator Jones for copy of letter of introduction which I gave the vice president of Clinchfield Navigation Co. to Gen. Goethals, herewith please find this copy, together with other letters bearing on this matter, written by me from New York to Gen. Goethals. You and Senator Jones will observe that my letter of April 25 explains my position in the matter, and will note that my letter of May 18 explains the change in plans and specifications of the four ships, that they all conform to duplicate and standard ships from Government plans, as I explained yesterday, stating that record was made of this matter.

You will also observe reference is made to contract which, it will be seen, I had no knowledge of, nor had I seen same. Further, as I stated to you, I had no knowledge of the contract for the four ships first placed, nor had I knowledge of any financial relationship between the Clinchfield people and the Sloan yards, and have not at this time, for this matter was one in which I was not in any way concerned.

Respectfully, yours,

THEO. E. FERRIS,
Naval Architect and Consulting Engineer.

MAY 7, 1917.

Gen. GEORGE W. GOETHALS,
Care of U. S. Shipping Board Emergency Fleet Corporation,
Munsey Building, Washington, D. C.

MY DEAR GEN. GOETHALS: In view of the importance of the proposition of the Clinchfield Navigation Co. (Inc.), who represent the Sloan Shipyards Corporation, Olympia, Wash., an already equipped wooden yard of good capacity and with a reputation for building wooden vessels, I am taking the liberty of hereby introducing to you Mr. C. M. Barnett, vice president Clinchfield Navigation Co. (Inc.), who wishes to take only a few minutes of your time to confer with you in the matter of building the ships which I have spoken to you about.

Yours, respectfully,

THEO. E. FERRIS.

APRIL 25, 1917.

Gen. GEORGE W. GOETHALS,
Care U. S. Shipping Board Emergency Fleet Corporation,
Munsey Building, Washington, D. C.

MY DEAR GEN. GOETHALS: Referring to my telegram in reference to 20 ships on the Pacific coast (good builders), I would explain that 8 of these ships are now under construction from my plans for the Clinchfield Navigation Co. (Inc.), who are clients of mine. I wish to explain this, so that my position in the matter is understood and will not be conflicting, now that I am associated with you in the Government work. I have no interest in the ships except to represent my clients in the planning and building of the vessels.

This same yard claims to be in position to undertake 12 more ships, steam propelled, and make delivery as stated in their proposition inclosed.

If the matter is of any interest to you, I shall be pleased to render as much service as you may request.

Yours, respectfully,

THEO. E. FERRIS.

MAY 18, 1917.

Gen. GEORGE W. GOETHALS,
Care U. S. Shipping Board Emergency Fleet Corporation.
Munsey Building, Washington, D. C.

SIR: Referring to the 4 wooden ships offered by the Sloan Shipyards Corporation, represented by the Clinchfield Navigation Co., (Inc.), of New York, now under construction including 12 additional duplicate ships; I have changed the plans and specifications of the 4 original ships so that the entire 16 ships may be constructed as an exact duplication of our standard wooden ship, with single screw reciprocating machinery.

Therefore, with regard to my approval of the plans and specifications of these ships, if you will please arrange that the plans of the standard fir ship, consisting of lines, table of offsets, midships section, inboard profile, deck plans, together with printed specifications with amendments including single screw reciprocating propelling machinery, be attached to the contract they will become contract plans and specifications in accordance with the terms of the contract, which I understand Mr. Cotton has concluded with Mr. Barnett.

If you will please also arrange that Mr. Barnett be supplied with duplicate plans and specifications that he may forward same to the shipbuilders, the ships will be built in accordance therewith.

I felt it would be more satisfactory to you for these ships to be built strictly in accordance with the standard plans and specifications, which is the reason I have adjusted the matter accordingly.

Respectfully, yours,

THEO. E. FERRIS.

The CHAIRMAN. You knew, Mr. Ferris, that the Clinchfield Co. did not have any shipyards, and did not propose to have any shipyards?

Mr. FERRIS. Well, when you say "did not propose to have any shipyards," I did not know whether they were financially interested, or part owners, in this shipyard or not. But I did know the Clinchfield Co. as owners of ships, and as my clients.

Now, if you will permit me I should like to say that I have not any interest in any shipyard, ship-operating company, or with any brokers, or in any patent devices, or in any royalties. I have never introduced in my business a brokerage branch. I try to carry my business on in a manner strictly professional, working for my clients and doing the best I can for them, and having no interest aside from that. For instance, you will find in some specifications where it specifies that a certain patented device shall be used; that is called for in the specification sometimes. Well the patentee of that device sometimes happens to be the author of that of the specifications; and it does not look to me to be a good practice, and I have always tried to keep myself clear of those sort of things. I say this, so that the committee will understand that I have no interest, so far as the relation of those people are concerned. In fact, I knew nothing about it.

Senator JONES. And they had not suggested to you that they were going to finance the Sloan people or help them out in any way?

Mr. FERRIS. No; they had not suggested that.

Senator JONES. Mr. Ferris, so far as you knew at that time, you only knew that the Clinchfield Navigation Co. did not have any shipyards and were not themselves building ships?

Mr. FERRIS. No; I did not know that they were not the agents for Sloan or something of that kind.

Senator JONES. That was not what I asked you, Mr. Ferris. I just said that you did know at the time that they had no shipbuilding plant or yard and were not building ships. You knew that, did you not?

Mr. FERRIS. Yes; I did.

Senator JONES. And you did not know that they had any interest in or were financing the Sloan Corporation or any other corporation, and they did not suggest to you that they were going to do that?

Mr. FERRIS. Yes; I think they did suggest to me that they were going to do it.

Senator JONES. Well, who suggested that?

Mr. FERRIS. I had some impression that they had some relations with the Sloan yard, or would have, or something of that kind.

Senator JONES. Well, how did you get that impression?

Mr. FERRIS. Well, from things I had seen and from remarks that had passed.

Senator JONES. Did you get that impression from any conversation with representatives of the Clinchfield Navigation Co.?

Mr. FERRIS. No.

Senator JONES. So that you have no information from them whatever that they were going to finance or interest themselves in the Sloan Corporation or in any other yard?

Mr. FERRIS. No. As to making the recommendation for 12 ships or anything of that kind—as I have done in several other cases, I simply gave Mr. Barnett a letter of introduction to Gen. Goethals. My recollection is that I made no recommendation or mentioned the number of ships. And so far as changing those plans over to Government ships is concerned same is of record.

Senator JONES. Yes; you just made them conform to what is now known as the Ferris plan?

Mr. FERRIS. Yes; to get a standard; to get them all the same.

Senator JONES. That is all I have to ask, Mr. Chairman.

Senator JOHNSON. What was it that they sold to the Government in these four ships? They had not commenced the construction, had they, when the sale was made?

Mr. FERRIS. Just how do you mean, Senator Johnson?

Senator JOHNSON. Well, they had a contract for four ships of a certain specific type; subsequently those four ships were sold at an increase of—was it $100,000 each?

Senator JONES. A little more than that. They had a contract to have them built for $385,000, and they sold them for $490,000.

Senator JOHNSON. Yes; they had a contract to have them built for $385,000; then for $490,000 the ships were to be made for the Government, according to the report of your district officer, the sale being made of the contract—or of the ships—to the Government?

Mr. FERRIS. No; I do not know about that.

Senator JOHNSON. What was the time, Senator Jones, that the transfer was made to the Government of the four ships and the Government took them over?

Senator JONES. I do not think there is anything in this report [indicating] to show that.

Senator NELSON. The ships were not built at that time; they were just bargained for, as I understand it.

Mr. FERRIS. I think the keels were laid.

Senator JONES. I do not know how long they have had the contract with the Government; there is nothing here to show that.

Senator JOHNSON. Well, they were just turned over to the Government for $105,000 additional, in each case, for the ships?

Mr. FERRIS. That I know nothing about.

Senator JOHNSON. That is what the report which is here in the record [indicating] shows, is it not?

Senator NELSON. Right here, I will ask you, Senator Jones and Senator Johnson, were these four ships to be paid for at a higher rate than the residue of the ships contracted for?

Senator JONES. No; I think all the 16 ships were contracted for at $490,000 each.

Senator NELSON. So that these ships and the others that they were to construct thereafter were all at the same price?

Senator JONES. I think so.

Senator JOHNSON. Yes; and at that time they had agreed to construct four of the ships for $105,000 less apiece.

Senator NELSON. And so that the Government not only paid $105,000 more for these four ships but also for the other ships?

Senator JOHNSON. Yes.

Senator NELSON. For all of them?

Senator JOHNSON. Yes.

Senator NELSON. The Government refused to adopt the standard that had been established between the Sloane Co. and the Clinchfield Co. That is your view of it?

Senator JONES. The Government refused to adopt the standard that had been established. The aggregate extra expense, however, would be only something like $1,600,000; and that would be a mere bagatelle.

Senator NELSON. How many ships were there? Were there 12 ships?

The CHAIRMAN. I gather that the price of $385,000 was for ships of a type different from the Ferris type, and they had to be changed to the Ferris type; and then that price was put on all the ships of the Ferris type.

Mr. FERRIS. I assume that the 16 ships were negotiated for at a certain price. I know nothing about the prices.

The CHAIRMAN. Well, they changed these ships that had been contracted for?

Mr. FERRIS. That was my understanding. I thought that if these people were going to build these ships they should all be the same, all the type of the Government ships.

Senator NELSON. How much additional expense did that change in those four ships involve; was it $25,000 for each ship?

Mr. FERRIS. Well, let us say $30,000.

Senator JONES. Let me suggest here that the contract with the Government by the Sloane people says that they were to construct 16 ships at $490,000 each; so that the price that they agreed on for those four ships was just the same as for the other ships.

Senator NELSON. Yes.

Mr. FERRIS. Well, is not that $490,000 less per ton than the prices for ships subsequently contracted for?

Senator NELSON. What would that be per ton?

Mr. FERRIS. That would be $140. I think the wooden ships went up to something like $153 a ton.

Senator NELSON. It would be about $140 per ton dead-weight?

Mr. FERRIS. $138 or $140.

Senator NELSON. And the contract prices for ships after that were higher than that?

Mr. FERRIS. The contract prices for ships after that were higher than those contracts.

The CHAIRMAN. Are there any other questions to be asked Mr. Ferris? I believe that is all, Mr. Ferris.

Mr. FERRIS. Mr. Chairman, may I refer to this list of references which I have here [indicating], so that they may go in the record? The purpose of that is, if there are any inquiries the committee wishes to make of prominent people, or anything of that kind, I will be glad to have you refer to this list. And if you can find any ship that I have made that has been unsuccessful or unsatisfactory, I will be glad to know that. I should like very much to have the names of these references go in the record.

The CHAIRMAN. There is no objection to that; the list will be inserted in the record.

(The list referred to by Mr. Ferris is here printed in full, as follows:)

Names of persons from whom I ask the committee to verify my qualifications as a naval architect and marine engineer and to inquire as to the satisfactory performance and success of the ships they have received as result of my work, and if I have turned out any unsuccessful ship will be glad to know of it.

Mr. Galen L. Stone, president Atlantic, Gulf & West Indies Steamship Line, 11 Broadway, New York City.

Mr. H. H. Raymond, president Clyde & Mallory Steamship Co., Pier 36, North River, New York City.

Mr. Alfred G. Smith, president the New York & Cuba Mail Steamship Co., Pier 13, East River, New York City.

Mr. Franklin D. Mooney, president the New York & Porto Rico Steamship Co., 11 Broadway, New York City.

Mr. Frank C. Munson, president Munson Steamship Line, 82 Beaver Street, New York City.

Messrs. Bliss, Dallett & Co., Red D Line, 82 Wall Street, New York City.

Mr. Herbert Walker, president Old Dominion Steamship Co., New York City.

Mr. Chester W. Chapin, ex-president New Haven Steamboat Line, New York City.

Mr. William E. Iselin, New York City.

Mr. James Ford, president International Rubber Co., New York City.

Mr. James E. Farrell, president United States Steel Co., 71 Broadway, New York City.

Mr. L. W. Francis, secretary Witherbee, Sherman & Co., 2 Rector Street, New York City.

Mr. P. A. S. Franklin, president International Mercantile Marine Co., 9 Broadway, New York City.

Mr. R. C. Viet, Standard Oil Co., New York City.

Mr. Ernest Bull, Bull Steamship Co., New York City.

Mr. Edgar Luckenbach, Luckenbach Steamship Co., New York City.

Mr. Kingsbury Curtis, of Messrs. Curtis, Mallett & Provose, New York City.

Mr. O. H. Otterbridge, president New York Chamber of Commerce, New York City.

Mr. Henry R. Mallory, ex-president Mallory Steamship Co., and Atlantic, Gulf & West Indies Steamship Co., Port Chester, N. Y.

SHIPBUILDERS.

Mr. M. E. Farr, president the American Shipbuilding Co., Cleveland, Ohio.

Mr. Antonio C. Pessano, chairman of board, Great Lakes Engineering Works, Detroit, Mich.

Mr. William H. Todd, president Todd Shipyards Corporation, 15 Whitehall Street, New York City.

Mr. Homer L. Ferguson, president Newport News Shipbuilding & Dry Dock Co., Newport News, Va.

Mr. William H. Hand, president the William Cramp & Sons Ship & Engine Building Co, Philadelphia, Pa.

Mr. J. Howard Pew, president Sun Shipbuilding Co., Philadelphia, Pa.

Mr. William H. Wood, Bethlehem Shipbuilding Corporation, Maryland plant, Sparrows Point, Md.

Mr. James E. Powell, Bethlehem Shipbuilding Corporation, South Bethlehem, Pa.

Mr. William G. Coxe, ex-president Harlan & Hollingsworth Corporation Wilmington, Del.

Mr. Harry Sawyer, secretary-treasurer Kelly, Spear Co., Bath, Me.

Mr. John Moore, of Moore & Scott Iron Works, San Francisco, Cal.

Mr. C. W. Wiley, president Seattle Construction & Dry Dock Co., Seattle, Wash.

Mr. Ames, president Ames Shipbuilding Co., Seattle, Wash.

Mr. FERRIS. The names on that list represent some of the biggest shipowners in the country—ship operators.

Senator NELSON. That you have worked for?

Mr. FERRIS. That I have worked for and who know of my work, and I will be very glad to have you inquire of them, or do anything that you like in that direction.

Senator Nelson spoke in the committee meeting of yesterday about a program of ships. I have here a program showing the sizes of ships. Would the committee care to have that go in the record?

Senator NELSON. Yes; if it gives the entire program.

Senator HARDING. Mr. Chairman, I suggest that that diagram be filed, rather than made a part of the printed record. That is a rather difficult thing to have printed in the record.

Senator NELSON. Do you think that that ought to be kept secret, or would there be any harm in making that information public?

Mr. FERRIS. Well, I would not like to say about that. It is a detailed statement of the different types of ships, according to the program for steel ships, and it gives the dimensions, the materials, the amount of steel, and that sort of thing to give the builders the necessary information.

Senator NELSON. But does it state when they are to be completed?

Mr. FERRIS. No, nothing of the kind; it gives the elements of the ship.

Senator NELSON. Or what proportion of the work has been done?

Mr. FERRIS. No.

Senator HARDING. I think it had better be made a committee file, Mr. Chairman.

Senator NELSON. I do not see why that should not go into the record.

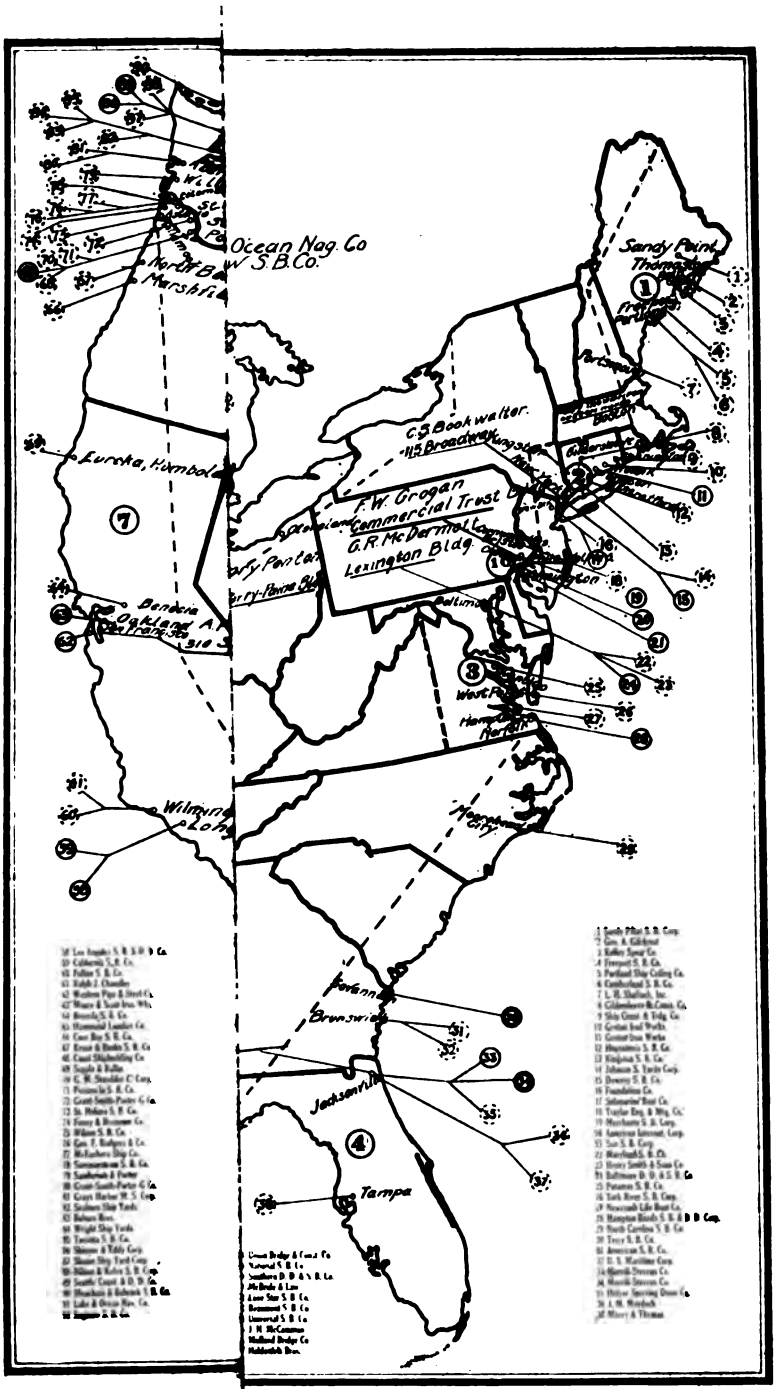
Senator HARDING. Well, it is a difficult thing to put into the record intelligibly.

The CHAIRMAN. Well, the diagram can be filed, and the members of the committee can examine it; and we will withhold the publication of it for the present and the committee can determine later whether it shall be printed or not.

(The map referred to by Mr. Ferris is hereto attached and reproduced in full.

Have you anything else to offer, Mr. Ferris?

Mr. FERRIS. I should like to refer briefly to the changes in the timber schedule for the wooden ships. I want to make it clear, if I may, that that is a change in building material and not a change in design of ships. We have heard a discussion of the change in the


Ocean Nag. Co
W. S.B.Co.
Sandy Point
Eureka, Humbol
Benicia
Oakland
Wilmington
C.S. Bookwalter.
115 Broadway
F.W. Grogan
Commercial Trust
G.R. McDermott
Lexington Bldg.
Baltimore
Norfolk
Hampton City
Brunswick
Jacksonville
Tampa

design of ships. What is meant by that is a change of type, a change of form. Nothing of that kind has been done. I want to draw the distinction between change of timber schedule and change in design of ships.

The CHAIRMAN. Did you get out a schedule?

Mr. FERRIS. Yes, sir.

The CHAIRMAN. When was the last schedule gotten out?

Mr. FERRIS. In October, I think; it was the schedule of the change of these floors, whenever that took place.

The CHAIRMAN. It was some time in November, I think.

Mr. FERRIS. Now, in the changes in the timber schedule, the board feet of timber—the total amount of increases of timber——

Senator NELSON (interposing). They changed the dimensions of some of the sizes?

Mr. FERRIS. They were changed to help the situation, to get the timber in the mills.

Senator NELSON. Were they enlarged or diminished?

Mr. FERRIS. Diminished as far as we could. Now, the board feet ran up, due to shortening of timbers allowing for the scarfs. So that if you find a change of that kind, the increase of board feet is thus accounted for.

And I would like to say with regard to the yellow-pine people that I have done all I could to help that situation, making the timber schedule comply, as far as practicable, with the size of timber to adjust matters. And I must say, on the other hand, that they have done everything they could, and I think they have done remarkably well on the whole situation. That is the way I feel about it. It has been a cooperative work, and everyone has worked hard to accomplish the result that we wanted.

The CHAIRMAN. As a matter of fact, the program enlarged as you proceeded, did it not?

Mr. FERRIS. Very much, and there were demands on the timber from other sources.

The CHAIRMAN. For the cantonments, and so on?

Mr. FERRIS. Yes; and I think they have done very well. So far as I know, in all my dealings with them, they have done their very best; it seemed to be their spirit to do everything possible.

Senator NELSON. I want to ask you now, as I asked yesterday, what suggestions can you make to us that will expedite this shipbuilding and ship-operating scheme; that will give us the shipping that we now need?

Mr. FERRIS. I think, Senator Nelson, that that is made up of several elements. We have discussed labor, materials, equipments, machinery, and all that sort of thing. That has got to go to the builder. Make the builder responsible; put him on his own bottom; make him produce coordination in the building. And the technical feature—I mean what we term keeping the people straight; he does not know what to do and what not to do——

Senator NELSON (interposing). But do you not think that to supply our immediate wants, the first effort should be given to those idle neutral ships in some way?

Mr. FERRIS. If they can be gotten.

Senator NELSON. If they can be taken, either by requisition or by purchase?

Mr. FERRIS. Yes, sir.

Senator NELSON. That would give us vessels that we could put immediately into service, would it not?

Mr. FERRIS. Yes; they are ready to operate; they are what we call "on dispatch."

Senator NELSON. And there is about a million of tonnage of neutral shipping——

Mr. FERRIS. Yes, sir.

Senator NELSON (continuing). That has been idle in our harbors for a number of months?

Mr. FERRIS. Yes.

Senator NELSON. And some of it has been loaded with grain that has been spoiling?

Mr. FERRIS. That is correct, Senator.

The CHAIRMAN. That is all, I believe, Mr. Ferris.

Senator JONES. Just a moment, Mr. Chairman, if I may ask him a few questions. You may not be able to furnish this information, Mr. Ferris, but if you can I wish you would. I have just received a letter from one of the shipbuilders on the Pacific coast in which he points out some of the difficulties that they have had and makes some suggestions as to how he thinks this shipbuilding program can be speeded up. The first question I will ask you is if you know anything about this situation: He says [reading]:

The Government fixed a price of $35 per F. B. M. for a complete ship built, and our contracts were based on that price, and that price governed for a few months, until the Government itself made a higher price, $40 and $42 per F. B. M. for about 40,000,000 feet to be shipped from Puget Sound to Atlantic coast yards.

Do you know anything about that?

Mr. FERRIS. No, sir. I think Mr. Browne can explain about that.

Senator JONES. Well, do you know anything about the Foundation Co., of Tacoma, Wash.?

Mr. FERRIS. I know they have a yard out there. That is the same Foundation Co. that has a yard in Newark Bay.

Senator JONES. Then the letter goes on to say that—

About the same time several private yards not doing United States work, one of which is the Foundation Co. in Tacoma, building schooners for the French Government, commenced to bid for lumber, and they are bidding up to $45 per F. B. M. and, consequently, this one shipyard, which will require about 35,000,000 feet to build these 20 vessels, is taking the material all away from Government yards.

Do you know anything about that?

Mr. FERRIS. I do not. I know they are building those ships.

Senator JONES. Do you know what size those shooners are?

Mr. FERRIS. I do not. My impression is that they are about 230 feet long; say, about 2,500 tons.

Senator NELSON. Are they sailing or steam vessels?

Mr. FERRIS. I think they are sailing ships with motor engines.

Senator JONES. They would not be of the kind that the Government could commandeer?

Mr. FERRIS. No. You see, the Government legislated not to accept anything under 2,500 tons. Mr. Browne can explain that situation.

Senator JONES. The writer of this letter suggested this as a remedy:

First, one price only for ship lumber for complete ship build.

What do you think about that suggestion, "One price only for ship material for complete ship build"?

Mr. FERRIS. Well, I would think that that would be all right. Of course, the longer lumber in the higher grade runs higher in price; but that is an average for the whole schedule.

Senator JONES. You think anyhow that if the Government fixes the prices of lumber for these people, and they enter into a contract, that they should not themselves afterwards come out and make higher bids?

Mr. FERRIS. No, indeed.

Senator JONES. The writer suggests, second, that an embargo be issued against lumber for any except Government ships, so that the people building ships for the Government can get all the lumber they need to build Government ships at prompt speed.

Mr. FERRIS. That is all right.

Senator JONES. Now, this point I think you covered in your suggestion of yesterday. He recommends the placing of all contracts with responsible, operating yards, giving them all that they can produce for the next two years.

Mr. FERRIS. On wooden ships?

Senator JONES. Yes; he is a wooden-ship builder.

Mr. FERRIS. I am a believer in the wooden ship. I believe it has got its place, and I believe the men who are building the ships and producing them should have more contracts.

Senator JONES. The reason he suggests that remedy is that in another paragraph he says, "In my best judgment, Babare Bros."—that is another company, I guess—"Babare Bros. ought to be building two ships which could be as far advanced as the one now is, which contracts for two more are waiting delivery of the first two; and in my case I ought to have four as far advanced as my present two, with four more contracts awaiting me after the delivery of the first four."

Because, he says then he can plan his labor organization and all that sort of thing to much better advantage.

Mr. FERRIS. Well, I would think the continuation of wooden ships by contractors that are producing them now would be good policy. Of course, we can not ever regard the wooden ship as equal to the steel ship; but it will fill its place in an emergency, and be of some use after the war.

Senator JONES. And if we are going to build wooden ships in order to get a lot of them expeditiously we should follow some plan?

Mr. FERRIS. Yes; we should give them the contracts.

The CHAIRMAN. It is now 12 o'clock. If it is agreeable to the committee, we can take a recess now and meet again at half past 2 this afternoon and hear Mr. Sanford; he can tell us about the yellow-pine situation.

(Thereupon, at 12 o'clock meridian, the committee took a recess until 2.30 o'clock p. m.)

AFTER RECESS.

(At 2.30 o'clock p. m. the committee reassembled, pursuant to the taking of the recess.)

The CHAIRMAN. We are ready, Mr. Sanford, if you will take the chair.

STATEMENT OF MR. F. L. SANFORD, MEMBER OF SOUTHERN PINE ASSOCIATION AND MEMBER OF EXECUTIVE COMMITTEE OF SOUTHERN PINE EMERGENCY BUREAU.

The CHAIRMAN. Mr. Sanford, state your full name and residence.

Mr. SANFORD. F. L. Sanford, Zona, La.

The CHAIRMAN. How long have you lived in Louisiana?

Mr. SANFORD. About 10 years.

The CHAIRMAN. From what State did you come to Louisiana?

Mr. SANFORD. Alabama.

The CHAIRMAN. And before that?

Mr. SANFORD. Illinois.

The CHAIRMAN. What has been your business, Mr. Sanford?

Mr. SANFORD. I have been in the lumber business for about 15 years.

The CHAIRMAN. What kind of lumber business?

Mr. SANFORD. General run of southern yellow pine.

The CHAIRMAN. Are you connected with the Southern Pine Association?

Mr. SANFORD. Yes.

The CHAIRMAN. How?

Mr. SANFORD. I am a manufacturer—one of the members of the association; I am not an officer in the Southern Pine Association.

The CHAIRMAN. You are not an officer in the Southern Pine Association?

Mr. SANFORD. I am not an officer in the association; no.

The CHAIRMAN. You are one of the members of the association?

Mr. SANFORD. One of the members of the association, but I am one of the executive committee of the Southern Pine Emergency Bureau, which is a war board.

The CHAIRMAN. You had to do with negotiations and transactions between the bureau and the Emergency Fleet Corporation?

Mr. SANFORD. I had; yes.

The CHAIRMAN. Are you familiar with the yellow-pine lumber situation?

Mr. SANFORD. Yes, sir.

The CHAIRMAN. Mr. Sanford, statements have been made here to the effect that there was a shortage of timber, a shortage of material for building ships, and the delays occasioned by the inability of the Southern Pine Emergency Bureau to carry out its undertakings with the Emergency Fleet Corporation. Will you please make us a general statement covering the situation.

Mr. SANFORD. I will make a general statement to you which I think covers the full situation from the time we were asked to come into this. In making this statement I am going to ask that we be allowed to file the complete statement with your committee covering fully the plans which are mentioned briefly in this statement. My thought was that we would furnish copies of the letters, etc., referred to if it was thought desirable.

Statements have been made during your investigation which have created the impression that the Southern Pine Lumbermen have not been furnishing lumber for the wooden ships as quickly as they agreed to do. We do not think these statements have been made

with any idea of trying to shift the blame for the delay in the building of wooden ships upon our industry, but rather because the parties making them are not thoroughly acquainted with the circumstances under which we undertook the task of furnishing the enormous amount of large-sized timbers necessary for the carrying out of the ship program and the many difficulties we have had to contend with and overcome in the execution of the work.

On March 23, 1917, the Shipping Board wired the secretary of the Southern Pine Association (an organization of manufacturers representing a production of approximately 3,000,000,000 feet of lumber a year, a considerable amount of which is timber not suitable for shipbuilding purposes), asking information pertaining to facilities in the South for ship construction. Within six days the manufacturers were canvassed and the Shipping Board was given the desired information. At that time we offered our assistance in any way possible.

During the next 30 days, after the exchange of numerous letters and telegrams between the association and the Shipping Board, on April 24, a committee was appointed to confer with the Shipping Board. This committee was given full power to bind each of the members of the association to furnish their pro rata share of any lumber order that might be agreed upon between the committee and the Shipping Board officials.

The committee came to Washington April 30 and were in conference with Shipping Board officials for five days. They were given to understand at that time that there would not be to exceed 50 wooden ships built. At the conference it developed that no practical Southern Pine Lumberman had been consulted in making out the schedule of lumber necessary for each ship, and a number of changes were recommended by our committee. Most of these suggestions were approved by Mr. Ferris, the naval architect, who designed the ship.

The schedule submitted to our committee at that time called for 1,123,857 feet of lumber for each ship. In this schedule there were 280 flitches required and they were asked for in an average width of 26 inches, but no specified number of pieces of any one width was, nor was any maximum width mentioned. These amounted to 38,340 feet of lumber for each ship. Revisions of the schedule found necessary since that time have increased the amount required for each ship to 1,531,410 feet and the flitches now asked for are 570 pieces in specified widths of 24, 26, 28, 30, 32, and 34 inches, averaging 28.55 inches in width and amounting to 122,016 feet, an increase in the most difficult sizes of more than 100 per cent and an increase in width of approximately 10 per cent; the flitches for the 30 ships amounting to 14,000 pieces. At present for 250 ships we are asked to furnish 142,800 pieces and instead of an average width of 25 inches, the average width now insisted upon is 28.55 inches.

The CHAIRMAN. How long was that material?

Mr. SANFORD. This is for short lengths, running, Senator, I think, not over 12 feet, most of them 7 to 10 feet.

Senator NELSON. How many wooden ships are being constructed now and how many did you suppose there were?

Mr. SANFORD. I am not able to inform you of that, but we were asked to furnish the lumber for 250 ships. My understanding is that

they have something like 237, which I think was the last number that I heard that had been contracted for.

To complete the 50 schedules first figured on calling for 56,197,850 feet of lumber, while the requirements for the 250 ships now planned are 382,852,500 feet, an increase of nearly 700 per cent.

This does not refer to anything but the yellow pine; it does not refer to fir ships on the Pacific coast.

Senator BANKHEAD. What is the average thickness of these pieces you are talking about?

Mr. SANFORD. That is very hard to answer, Senator. There are some of them—oh, these flitches?

Senator BANKHEAD. The short pieces.

Mr. SANFORD. The short pieces are 12 inches thick.

Senator BANKHEAD. Some are 28 inches?

Mr. SANFORD. Some are 34 inches wide.

Senator NELSON. In your statement you include the wooden ships on the Pacific coast too, do you not?

Mr. SANFORD. No; that is just for the yellow pine ships. There is not anything in this statement that refers to anything but the yellow pine.

Senator NELSON. None of the ships constructed on the Pacific coast?

Mr. SANFORD. Not at all.

Among the recommendations made by our committee at the conferences in April was one urging that all large timbers be made interchangeable with fir. This suggestion has been made by us on several occasions since then and so understand has recently been acted upon.

During June we were advised that the Shipping Board intended increasing the number of wooden ships to 100, and we agreed to get the lumber for these as quickly as possible, but no special time was mentioned.

In September we were asked to supply lumber for 150 additional ships, or a total of 250 ships. After a conference with Shipping Board officials we received a letter from Admiral Capps, from which I quote: "Please advise us immediately of your acceptance of this proposition, and state how many schedules can be produced and shipped before July 30, 1918, and how many additional schedules can be produced and shipped before December 31, 1918." In reply to this we wrote as follows: "We agree to produce and ship 100 of these additional schedules by July 30, 1918; 25 more by October 1, 1918; and the remaining 25 by January 1, 1919, though we will make every effort possible to make such deliveries sooner." In his letter of acceptance replying to this, Admiral Capps said: "We hereby accept your proposal as set forth in the above-mentioned letter." This shows conclusively that we had until July 30, 1918, to complete furnishing the lumber for the first 300 ships. To date we have shipped 130,000,000 feet. The amount of lumber yet to be shipped on December 29, 1917, to complete the 200 schedules we had agreed to furnish before July 30, 1918, is approximately 173,000,000 feet, an average for the 179 working days remaining of 986,000 feet per day, while for the month of December up to and including the 29th we have shipped an average of 76 cars a day, or about 1,284,000 feet. This is 33 per

cent more than necessary for us to complete delivery of the first 1,000 schedules by the time agreed upon.

We have been seriously delayed in getting frame timbers by changes made since we agreed in September to furnish the additional 150 schedules. When we agreed to furnish the additional 150 schedules, it was based on schedule 18. A month or six weeks later they came on with these specified woods, the wide woods, and we were told we had to get those, and we agreed to use every effort to do so.

At that time the schedule required that the flitches were to be furnished in widths 34 inches and up, with no particular average width. The change to specified widths from 24 inches to 34 inches made since that time has made delivery of these schedules much more difficult, and it may be found necessary to secure some of the wider pieces from the Pacific coast where, as you know, the timber grows to a greater diameter. However, we are going to do our best to secure them from our forests. Many concerns, owing to the difference in size of trees in individual holdings will be unable to furnish their proportion of them, while other operators may be able to produce more than the number required by them to fill the schedules upon which they are cutting.

Another delay was caused by a change in grade found necessary in 16 items amounting to over 310,000 feet or 20 per cent of the whole amount. When we accepted these orders these 16 items were to be of merchantable grade, which requires that they show heartwood the entire length on both side faces. In order to meet the requirements of the American Bureau of Shipping, so we were advised, they were changed in grade to all heartwood on one wide face and on all except 23,000 feet the requirement now is 85 per cent heartwood on both edges adjoining the wide heart face. This change found many manufacturers with a large number of logs in the woods cut to fill these items in a merchantable grade, but as it takes a log several inches larger in diameter to secure the heart-face grade other trees had to be cut before we could produce the new grade. As most manufacturers have several weeks' run of logs sawn ahead in the woods, the delay caused by this change was quite serious. Many of the logs that were out when the change was made were not cut into lengths which could be utilized in other timbers for the ship schedules and considerable loss was occasioned by their having to be cut into lumber for which they were really not suitable.

Since September we have also been obliged to cut on priority orders many million feet of timbers of large size for Gen. Pershing's use in France and for Government purposes in this country. Practically all of this would otherwise have been cut into ship timbers and had reduced our shipments, particularly of larger sized, very materially.

A number of manufacturers have gone to great expense in moving their logging operations into timber of larger size that under normal conditions would not have been reached in some instances for 8 or 10 years. In one instance I have been advised that a certain concern were spending more than $50,000 in this way, and that concern will not get into its big timber for some more weeks yet. After they get into that timber, they expect to be able to furnish a complete timber schedule a month. This concern and others that I have in mind

have been unable to complete building of railroads as yet. In another instance I know of an operator who purchased a large tract of timber to aid in production of larger sizes.

We are now planning on having made at our own expense by architects familiar with wooden shipbuilding, designs for wooden ships of 2,000 to 2,500 ton capacity. From information we can gather we believe that a considerably greater amount of tonnage of this sized ships could be produced annually than of the large size now being built.

I visited the yard of Henry Piaggio, at Orange, Tex., in August. That yard has, I think, over 20 ships laid down now. It is a private yard, and they are building a ship running from 2,000 to 2,500 tons.

Senator NELSON. Are they building them for the Government?

Mr. SANFORD. No, they are not building them for the Government; but every ship that goes into the water goes to Italy with war supplies, so that we are getting the same benefit of it as though it was for the Government. The timbers they use in those ships are materially smaller than are necessary for the larger ships.

The CHAIRMAN. Does the cutting of timber of that sort interfere with your filling these schedules?

Mr. SANFORD. It does, somewhat, but my understanding is that he had most of his large timber supply, and I think that they had arrangements with the Shipping Board, so that no timbers are allowed to go to them that will interfere with any schedules.

The CHAIRMAN. You mentioned you would advocate cutting timbers for this size of ships, and the question in my mind was: Would that interfere with your filling these orders?

Mr. SANFORD. Oh, I did not quite get your idea, Senator. No; because the sizes are so much smaller and we have so much more timber in our forests that will make the smaller sizes, from 12 inches down, that I feel certain that we could get out a great many more schedules of this smaller size ship, and still not interfere with our large-size ship.

The CHAIRMAN. Do you know anything about the operation of those ships to Italy, whether any of them have been used successfully?

Mr. SANFORD. The *City of Orange* was the first one that made the ocean trip. They are auxiliary ships; they have, I believe, three masts, and the *City of Orange* has a 200-horsepower gasoline engine. They are putting now two 200-horsepower engines in them. The *City of Orange* on her first trip across averaged, from Gulfport or Mobile to Genoa, a little over 8 knots an hour. Going down the Mediterranean she had a good breeze, and for one 24-hour period she averaged 16 knots. She beat the convoy from Gibralter into Genoa by four hours.

The CHAIRMAN. She returned safely?

Mr. SANFORD. She returned safely.

Senator JONES. Does the requirement of labor employed in those shipyards interfere with the labor in the Government shipyards?

Mr. SANFORD. If they were to turn loose the labor in those shipyards the Government would have more labor, as that yard has been established something like two years, now, and Mr. Piaggio told me that over 95 per cent of his labor had never worked on a ship before.

He had picked up the laborers down there and made shipbuilders of them.

We feel certain that we would furnish the lumber for two or three times as many ships of this capacity as we could of the larger on account of the much smaller timber necessary for their construction, and we sincerely trust that it will be decided to use the ways now being utilized in building the present type of wooden ships for the continuance of the wooden-ship program, but that the size of the ship will be reduced somewhat.

We realize that the Shipping Board has had an enormous proposition to get organized, that the officials in charge have made splendid progress in their work, but we also had a large organization to perfect. The Southern Pine Association was an association formed to promote the use of yellow pine, to provide uniform grading rules, and to furnish competent inspectors to see that lumber was properly graded. As such an organization we were running along smoothly, but when it came to the sales of our products we were highly competitive. At the request of the Council of National Defense, Secretary of War Baker, and the Shipping Board, we organized the Southern Pine Emergency Bureau, consisting not only of members of the Southern Pine Association but of many other manufacturers who were patriotic and anxious to aid the Government in winning the war. It was necessary for us to depart from old sales methods and organize a clearing house for Government business. Each member of the bureau was pledged to furnish orders allotted them to the limit of their ability. To organize the machinery necessary to take orders for many millions of feet, to distribute these orders among the mills nearest the point where the lumber was needed, to keep in touch with the orders until the lumber was all shipped, required many men, none of whom were familiar with such a vast undertaking. This organization was built up, and during six months has shipped from hundreds of mills about 30,000 cars of lumber or over 600,000,000 feet. This in addition to the lumber which we have furnished the Shipping Board.

This bureau has spent thousands of dollars in sending prominent men, and others, among the laborers at the mills to urge them to cooperate with each other in getting out every ship timber possible. We have had many posters printed and distributed and are constantly reminding the logging crews, sawyers, and all mill workers of the vital necessity of converting every tree possible into ship timbers, and we do not feel that the impressions which have no doubt been created in your minds and in the minds of the public, that the Southern Pine Lumbermen have fallen down in their agreements and that we overestimated our ability to furnish what was asked of us, should be allowed to remain, I want to thank you for the opportunity you have given us to state our position.

The CHAIRMAN. Let me ask you a few questions there, Mr. Sanford. First, did I understand you to say that there were other manufacturers then members of the Southern Pine Association, for instance, what are known as "independents" who became members of your Southern Pine Emergency Bureau?

Mr. SANFORD. Many of them.

The CHAIRMAN. How do the prices of ship timber compare with prices for commercial lumber?

Mr. SANFORD. The prices for ship timbers are anywhere from $3 to $20 lower than we could get for the same lumber on the commercial market to-day.

Senator NELSON. You mean from $3 to $20 a thousand?

Mr. SANFORD. Yes, sir.

The CHAIRMAN. When were the orders placed at the mills?

Mr. SANFORD. There were 19 orders placed the latter part of June, and 31 placed in July; the balance since that time. One thing I neglected to say there, was this, that from the 15th of June until probably the 15th of September or 1st of October we shipped approximately 500,000,000 feet of lumber for cantoments.

We would get orders in, and we worked our loading crews all night long and worked them all day Sunday continuously, kept them busy all the time.

The CHAIRMAN. When were the first changes made in the schedule and by whom?

Mr. SANFORD. Schedule No. 1 was printed, as I remember it, May 20. In May, at any rate. I started cutting on schedule No 1 about the first of July and had cut one or two pieces when I received word not to cut any more, that there was being a revision made in the schedule. That came out in Schedule No. 18, which we got, as I remember it, between the 20th of July and the 1st of August. That had a great many changes. I think that, in fairness to the Shipping Board and Mr. Ferris, I should say this: When the first schedule was gotten out he had not completed the entire plan of his ship. He had completed the midship sections which was frames 32 to 63, I believe. Of course he had a rough outline of the rest of it, but some of this increase in the amount of lumber used was on account of his not having thoroughly checked up fore and aft sections of the ship.

The CHAIRMAN. What effect did these changes have in deliveries?

Mr. SANFORD. There were a great many mills the first of July that were ready to go to cutting that did not go to cutting until after Schedule 18 came out, which probably caused a delay of a month.

The CHAIRMAN. When did you say Schedule 18 came out?

Mr. SANFORD. Between July 20 and August 1 is my impression.

The CHAIRMAN. Do I understand you to say there was no promise of deliveries made except for delivery of the first 200 schedules by July 30, 1918?

Mr. SANFORD. Not as far as I can find anywhere in the record, Senator.

The CHAIRMAN. When was that promise made?

Mr. SANFORD. To deliver the first 200 ships——

The CHAIRMAN. Two hundred schedules by July 30, 1918.

Mr. SANFORD. The 20th day of September.

The CHAIRMAN. When were you first notified regarding the changes made in the width of the flitch timbers and by whom?

Mr. SANFORD (examining papers). I do not seem to find that here, but it was about October 20.

The CHAIRMAN. What effect did that change have?

Mr. SANFORD. It was a very hard blow for us. It was 24 inches and up and no specified width. You take a flitch timber 24 inches in diameter and add up to 34 inches on there and you have got some wider timber. You take a timber that wide [illustrating with rule]

and 12 inches thick and it is very difficult to get, because the large trees, as you know, have wind shakes in them, and it is very difficult to get a timber as wide as that and 12 inches thick without cutting into that wind shake, which is not allowed to be used in the work. They are very difficult to find. I had two men who spent over three days in going over 2,500 acres of timber to find trees that would make these 34-inch flitches.

Senator NELSON. What was the length of those timbers required, as near as you can say?

Mr. SANFORD. I think that the 34-inch timbers were 7 feet long; the longest of the others were 11 feet.

Senator NELSON. And 34, you say, by 12 inches?

Mr. SANFORD. Twelve by 34, 7 feet long.

Senator BANKHEAD. How much of that is to be all heart?

Mr. SANFORD. That is merchantable grade.

Senator BANKHEAD. Heart has to show on both sides?

Mr. SANFORD. Heart has to show on both sides. We were allowed at that time to cut those flitches with bark edge allowed on it, and in cutting those—those two pieces were for use in the bow of the ship, and they are cut into that shape [illustrating] by cutting those out of a tree with a flitch, if you had a tree that had a swell butt, you could bring it down here and working down along this side come up here and utilize this swell here [illustrating]. On December 19 an order came out that these flitches must be square edges on the 12-inch face. In other words, if there is a swell butted tree that is cut off and it takes a tree that is two or three inches wider and greater in diameter to cut that piece out. That is another thing that is going to make it hard. Two pieces 34 inches wide does not sound very much, but when you have 500 pieces for 250 ships it is quite a hardship. In addition to those two pieces of 34-inch we have 30 pieces, or 750 in all, 32 inches wide 8 and 9 feet long. We have 176 pieces 30 inches wide from 6 to 11 feet long; that means 44,000 pieces. We have 224 pieces, 28-inch, running from 9 to 15 feet; that means 56,000 pieces more of 28-inch.

The CHAIRMAN. Those changes were not made at the request of your bureau, were they?

Mr. SANFORD. They certainly were not. It was found necessary, I suppose.

The CHAIRMAN. Have there been any other changes made since you agreed to get out 250 ships?

Mr. SANFORD. The heart-face specification was made since that time.

The CHAIRMAN. What is that?

Mr. SANFORD. That is the heart face instead of merchantable grade—the change that came out December 19.

The CHAIRMAN. What was that change?

Mr. SANFORD. That change was to square edge on certain items of flitches. Here is one which came out December 24, but it is merely a dressing change and does not affect it any.

Senator BANKHEAD. Are all these pieces rough dressed?

Mr. SANFORD. The flitches are rough.

The CHAIRMAN. Who ordered these changes?

Mr. SANFORD. The order came from the Shipping Board.

The CHAIRMAN. You mean the Emergency Fleet Corporation?

Mr. SANFORD. Yes; the Emergency Fleet Corporation.

The CHAIRMAN. Through whom—I mean what official?

Mr. SANFORD. I can not say. I suppose they came through the assistant general purchasing agent for lumber, Mr. W. J. Haynen.

The CHAIRMAN. What are the most difficult sizes you are required to furnish?

Mr. SANFORD. The 30, 32, and 34 inch flitches are very difficult sizes, and we have 10 pieces here of 12 by 24, running 16 to 32 feet, average 24 feet. We have two pieces 16 by 24, 40 feet; four other pieces 16 by 20, 44 feet.

Senator BANKHEAD. You mean for each ship?

Mr. SANFORD. For each ship—five pieces 12 by 22, 16 to 32 feet, 24 feet average.

The CHAIRMAN. When did you start cutting the schedules?

Mr. SANFORD. We started cutting late in June and the early part of July, and we were held up for about a month and told not to cut any more until the revised schedule was out.

The CHAIRMAN. Who told you that?

Mr. SANFORD. My recollection is that order came from Maj. Wood, who was Gen. Goethals's general purchasing agent.

The CHAIRMAN. You got instructions to stop cutting until these revised schedules were out, and you say that delayed you about a month?

Mr. SANFORD. That delayed us about a month.

The CHAIRMAN. That occasioned the delay in the actual cutting of the schedules?

Mr. SANFORD. Delayed us at least 30 days.

The CHAIRMAN. Has car shortage delayed you any?

Mr. SANFORD. It has delayed us quite materially. In August, I think it was, I was in Washington, and the Wausau Southern Lumber Co., at Marathon, Miss., sent a man up here to see if they could not get some cars. They had, as I remember it, about 20 carloads of ship timbers on the docks, and they have not been able to get a car for 10 days or two weeks; they had to stop cutting ship timbers because they had no place to store it. I visited a mill over in western Louisiana about Thanksgiving and at that mill the foreman told me that he had about 40 cars on ramps at that time. They were cutting right along and throwing it on the ground, but it had delayed materially.

The CHAIRMAN. Is there enough timber in the southern pine belt to cover these schedules?

Mr. SANFORD. I did not catch your question.

The CHAIRMAN. Is there timber enough in existence in the southern pine belt to cover these schedules?

Mr. SANFORD. We believe that there is. We were sure that it was there to cover them when we took the 250 schedules in September, but the sizes that they have required and found necessary are extremely difficult to get. We hope to be able to get them.

The CHAIRMAN. Do you find the Shipping Board ready to cooperate with you and receive suggestions?

Mr. SANFORD. They have always been very ready to help us. Mr. Ferris has been particularly anxious to help us. Of course, most of our help came from him because it was technical work. I was here this morning when he was testifying, and he mentioned—well, I

think it was yesterday—the filling in of floor timbers. That first came up by one of the shipbuilders, as I remember it, asking for timbers 13 by 23, 34 feet long, for filling in timbers between the short arm frames of the floor of the ship. We received that order just before I left Louisiana for Washington, and I left Mr. Ferris at the hotel. I spoke to him about it, and he asked me to take it up with Mr. Thayer, who is his assistant here in Washington. Mr. Thayer immediately took it up, and I wrote a letter to him at his request, as Mr. Ferris said. They had changed that to a built-up frame or filling, so that it is very much easier for us to get it out.

The CHAIRMAN. Have you any suggestions regarding the speeding up on delivery of lumber?

Mr. SANFORD. My thought is that if the flitches from 28 inches could be secured in fir from the coast that we could deliver the balance of our 250 schedules at least 60 if not 90 days earlier than we agreed to do.

The CHAIRMAN. Do you favor that suggestion of getting those pieces from the Pacific coast?

Mr. SANFORD. I do. We have recommended that several times. We are going to be able to furnish, I believe, without any trouble during the next 90 days practically all of the large timbers that were in schedule 18. The flitch timbers, I think, are the ones that are going to delay the construction. Those flitch timbers are used for the short arm frames of a ship, and, of course, they have to have those before they can put the planking or ceiling timbers or shook timbers or any of those timbers on. They are the ones that would delay them more than anything else.

The CHAIRMAN. Are there any other suggestions which occur to you? How are you making deliveries—are you behind on timbers very much?

Mr. SANFORD. We delivered during December 33 per cent more than is necessary for us to complete our delivery by July 30, and I might say that the two days since I made this statement up, which was last Saturday, I believe, the 29th, we have shipped over 90 cars each day instead of 76, which would leave 33 per cent more than necessary to complete the order by July 30.

The CHAIRMAN. Do you think the embargo placed on lumber has speeded up construction?

Mr. SANFORD. We think it has speeded up delivery materially.

The CHAIRMAN. You and your associates were in favor of or opposed to the embargo?

Mr. SANFORD. We were in favor of it. We recommended it very strongly.

The CHAIRMAN. Are you shipping lumber to Hog Island?

Mr. SANFORD. I have shipped some lumber to Hog Island and the association is shipping many thousands and millions of feet there.

The CHAIRMAN. Is there any difficulty in getting it shipped, or are they able to handle it as fast as shipped?

Mr. SANFORD. They have been very badly delayed in unloading that material up there, as I understand it, on account of lack of having their railroad tracks in. I believe that has been largely overcome within the last few weeks. My understanding now is that they have the situation pretty well in hand. I was told about three or four weeks ago, I think it was, that they had over 5,000 cars lying

on the sidings between the South and Hog Island waiting for them to get facilities for unloading, but I was told the other day that they were about caught up with that now.

The CHAIRMAN. Can they not bring lumber up by water?

Mr. SANFORD. They could if they had the ships.

The CHAIRMAN. The barges?

Mr. SANFORD. My understanding is that they are doing that. Mr. Brown, of the Shipping Board, told me that they were, as I remember, loading some barges now to come up from Jacksonville, and they are loading at Gulfport.

The CHAIRMAN. I noticed a full page advertisement in the Saturday Evening Post of December 29, 1917, with the heading, "Build now that home of your dreams," which seems to be an advertisement of lumber by the Southern Pine Association, and I want to ask you if you are furnishing orders of this kind at the expense of the Emergency Fleet Corporation schedules?

Mr. SANFORD. Absolutely not. The lumber that will be sold on that has got to be sold and moved in order to allow us to cut ship timbers. It is the sawed boards off of the large logs and top logs, and that lumber has got to be sold and it has got to be moved away from our mills to give us room to handle the ship timbers.

Senator BANKHEAD. You said a moment ago that you recommended these large timbers being obtained from the West? Was that recommendation occasioned by the change of the schedule after you had agreed to fill it?

Mr. SANFORD. It was, Senator. We could have gotten out the flitch timber 24 inches and up that were required in schedule 18 when we agreed to get out 250 ships.

Senator BANKHEAD. You would not have had great difficulty, perhaps, in filling your contract according to the first agreement for 250 ships?

Mr. SANFORD. Not at all.

Senator BANKHEAD. But your difficulty has been brought about by change in the schedules, increasing the size of timbers, which made it difficult for you to get them; is that a fact?

Mr. SANFORD. That is the fact, Senator.

The CHAIRMAN. You are not in agreement with Mr. Ferris in the statement that the failure of the Southern Pine Emergency Bureau to supply the material which was needed and planned and agreed to, and that that failure caused some two month's delay in the construction of the ships?

Mr. SANFORD. I did not understand Mr. Ferris's statement just as you put it, Senator. My understanding was that his statement was that we delayed on account of not having the lumber, not on account of our failure to deliver. The fact is that they have gone ahead and contracted for, say, 230 ships, and we did not agree to furnish the lumber as fast as they contracted for the ships nor as fast as they could use it. We said we would deliver 200 schedules by July 30, 1918, and we are delivering much faster than necessary to complete that shipment by July 30.

The CHAIRMAN. Some contracts call for it faster—not contracts with you, but contracts between the board and the builder?

Mr. SANFORD. That is something we have absolutely nothing to do with, of course.

The CHAIRMAN. So the delay did not arise by any breach of contract on your part?

Mr. SANFORD. We feel that it did not; we know that it did not.

Senator NELSON. Are you an employee of the Emergency Fleet Corporation now?

Mr. SANFORD. No, sir.

Senator NELSON. And never have been?

Mr. SANFORD. I never have been.

Senator NELSON. You represent the Southern Pine Association?

Mr. SANFORD. I represent the Southern Pine Emergency Bureau?

Senator NELSON. And the Southern pine manufacturers operate through that bureau in dealing with the Emergency Fleet Corporation?

Mr. SANFORD. Yes, sir.

Senator NELSON. What help do you employ in the mills and in the woods where you are getting out this timber; is it colored or white?

Mr. SANFORD. Largely colored.

Senator NELSON. You have had no trouble with strikes anywhere down there?

Mr. SANFORD. They have had considerable trouble with strikes in the western part of Louisiana and eastern Texas. There has been an average of one sawmill there burned up ever since we started getting out ship schedules.

Senator NELSON. A sawmill burned up?

Mr. SANFORD. Yes.

Senator NELSON. What has been the matter in dispute?

Mr. SANFORD. I think in every case I know of where there has been a strike it has been over wages.

Senator NELSON. Has there been strikes among the whites or among the coloreds?

Mr. SANFORD. Well, I think, principally among the whites. The situation is this down there, Senator Nelson: Those mills which have had these wage troubles have been mills that are located near the shipyards, and those men can go into the shipyards and get $3 or $4 or $5 a day, and in order to keep them in the sawmills where they need them just as badly as the ships end of it, it has been found necessary to increase their pay. There have been 3 or 4 mills which have had trouble, and that is all that I know of personally, but I think there have been 10 or 15 mills which have had some labor trouble.

Senator NELSON. But those mills which have been burned up, has that come from strikes, or has it come from people who are unfriendly to the Government?

Mr. SANFORD. We lay most of it to the I. W. W.'s.

Senator NELSON. You have some of them?

Mr. SANFORD. There may be some in the western part of the State.

Senator NELSON. Do you get that colored help that you have in the mills and in the woods at a cheaper wage than you do in whites, on the average?

Mr. SANFORD. Not for the same work. We pay them just as much for the same class as we do the whites.

Senator NELSON. Do the colored people perform the common work?

Mr. SANFORD. Largely.

Senator NELSON. And the skilled work is done by the whites?

Mr. SANFORD. Principally.

Senator NELSON. Have you had any trouble growing out of the fact of the two classes not working in harmony—is there any friction?

Mr. SANFORD. I never have heard of any trouble. They are used to working together down there.

Senator NELSON. Do they work in the woods where they do the logging?

Mr. SANFORD. Yes.

Senator NELSON. White and colored men?

Mr. SANFORD. They work right together.

Senator NELSON. And the same in the sawmills?

Mr. SANFORD. The same in the sawmills?

Senator NELSON. And the lumberyards, too?

Mr. SANFORD. Well, in the yards we use almost entirely colored help, but in the woods our ox drivers and our line men on the skidders, and tong men are colored men, and our sawyers, our drum men on the skidders, and engineers, and trained men on our trains are mostly white.

Senator NELSON. Have you had any trouble to get help enough down there?

Mr. SANFORD. Our production has been reduced to approximately 15 per cent, and is now 15 per cent below normal, principally on account of not being able to get labor enough.

Senator NELSON. How do you account for the scarcity of labor—has it been more scarce than it was in former years?

Mr. SANFORD. There has been a great movement of colored help from the South to the North during the last 18 months. The shipyards starting in are paying so much higher wages than we can afford to pay that this has taken a great many men away from us.

The CHAIRMAN. Have there been many men taken into the Army?

Mr. SANFORD. A great many men have been taken into the Army, also. I lost five or six men out of my crew.

Senator NELSON. What is the average price you are receiving from the Government for this ship timber?

Mr. SANFORD. The average price agreed upon when we took these 150 additional schedules was $40 a thousand.

Senator NELSON. For all sizes?

Mr. SANFORD. For all sizes.

Senator NELSON. Large and small?

Mr. SANFORD. It was itemized and is itemized in schedule No. 23, giving the itemized prices. When they came in with the heart-faced specifications, it is a great deal more difficult to cut, and it is, just as is recognized in the different grades of steel, the difference in the value is recognized. They gave us an advance on those items of from $6 to $20 a thousand, and that brought the average for schedule up to approximately $42. In getting out these wide flitches, they, of course, carry a higher value, and I have not figured up at all to see how much difference that would make, but I should say probably 50 cents or a dollar.

Senator NELSON. Have they followed your suggestions in the matters of getting timbers from the Pacific coast?

Mr. SANFORD. Yes, sir.

Senator NELSON. They will be getting that in the shape of fir and that will relieve you from getting that portion of the timber out?

Mr. SANFORD. Very much.

Senator HARDING. You spoke of the mills being burned every little while. Is there any guard kept over those saw mills at all?

Mr. SANFORD. There are a number of mills which have armed guards around them in the western part of the State, and some in Florida. There is a mill which keeps six armed guards around their place all the time. They have spent, I suppose, $3,000 or $4,000 in building a high board fence around their plant.

Senator HARDING. Do you suspect these fires are due to alien enemies or I. W. W.'s?

Mr. SANFORD. It has all been laid down there. The thought was that it was the I. W. W.'s, but it has seemed rather peculiar to me that quite a number of the mills have been what we call "long mills," that will cut the timbers from 35 to 60 or 70 feet long, which are needed for the ship timbers. The Kirby Lumber Co., I suppose the largest manufacturers in the United States, have had both of their long mills burned up.

Senator NELSON. The suspicious thing in the matter of burning, as I understand it, is that they seem to select the mills which are manufacturing ship timbers; they have been the greatest sufferers?

Mr. SANFORD. They have been the greatest sufferers.

Senator JOHNSON. You said some changes made by Mr. Ferris have caused delays in furnishing the lumber. Were there any changes that were advantageous or beneficial to you?

Mr. SANFORD. Very much so. The specifications call for merchantable grade, which allows wane not exceeding one-eighth of the dimension of the face and one quarter of the length of the piece on one corner, or the equivalent on two or more corners, on not to exceed 10 per cent of the pieces.

Now, the shelf timbers have a 5-inch chamfer the entire length on one corner. I went to New York and spoke to Mr. Ferris about that and asked him if defects that would work out on one corner and still leave good wood when the 5 inches was worked off would be allowed. He said it would, and I said that no doubt there were a good many other timbers that could be worked the same way. He gave me his head draftsman there and we spent two days going over all the ships, and everything that could be worked off in that way was arranged for in the specifications.

Senator JOHNSON. If these changes thus made were advantageous to you, did they not offset those that delayed you?

Mr. SANFORD. The only thing that delayed us, or the principal thing that delayed us, was the revision of our schedule from schedule 1 to schedule 18, which took about two weeks. The sizes of the timbers made very little difference, Senator; it was merely the fact that we could not go ahead until they got out the new schedule.

Senator JOHNSON. During this year, 1917, from the time you first obtained the contract from the Shipping Board, how much delay had been occasioned by changes in specifications, or occasioned by causes emanating from the Shipping Board?

Mr. SANFORD. Well, I think the change from schedule 1 to schedule 18 caused a delay of from three to four weeks, and there was no other

change that caused a great delay in all of the items. The change from the merchantable grade to the heart-face grade made a delay for a short time on the items that were affected, but it would not affect the res of the schedule.

Senator JOHNSON. Would you say that the wooden ship program, because of the changes made at Washington by the Shipping Board or the Fleet Corporation, had been delayed a couple of months during 1917?

Mr. SANFORD. No, sir.

Senator JOHNSON. Would you approximate it?

Mr. SANFORD. I would think not to exceed five weeks.

Senator JOHNSON. How long have you been in the business, if you please, Mr. Sanford?

Mr. SANFORD. About 15 years.

Senator JOHNSON. What was the price of your lumber in 1913?

Mr. SANFORD. The average price for 1913 was, as I remember it, about $14.

Senator JOHNSON. In 1914, what was your average price?

Mr. SANFORD. About the same.

Senator JOHNSON. In 1915, what was your average price?

Mr. SANFORD. About $15.

Senator JOHNSON. In 1916 can you say what it was?

Mr. SANFORD. I should say about $18.

Senator JOHNSON. What is it now commercially?

Mr. SANFORD. The average is about $24 or $25.

Senator JOHNSON. Now?

Mr. SANFORD. Yes.

Senator JOHNSON. You received from the Government under the contract that you have, after allowing for the schedules that were subsequently changed, about $42 a thousand? Is that right?

Mr. SANFORD. Yes. Of course that price is for the highest price grade and the best grade in our log books. I would like to say there that the increase in cost during the last two or three years, Senator, has been very material. The report of the Federal Trade Commission will show that. We had occasion to figure it up, and since May our costs have increased $3 to $4 a thousand.

Senator JOHNSON. That is, the cost of production?

Mr. SANFORD. The cost of production, yes.

Senator JOHNSON. How much has your selling cost increased during that time?

Mr. SANFORD. I have no figures on that.

Senator JOHNSON. Well, it has increased at least $10 a thousand, has it not?

Mr. SANFORD. No. The price is not any more to-day than it was in May—it is not as high as it was in May.

Senator CALDER. I did not quite understand your reply to a question of Senator Johnson a moment ago. You said the average price of yellow pine timber you were selling the Shipping Board in 1917 was $24 a thousand.

Mr. SANFORD. No; the average price of all the lumber that is sold from the mills. That includes everything that is sold, Senator.

Senator CALDER. You spoke of "merchantable quality." What are the several qualities?

Mr. SANFORD. Well, in timber there is No. 1 common grade. There is a square, aged, and sound grade. There is a merchantable grade. There is a merchantable 1905 grade. There is the heart-faced grade, 85 per cent heart, girth measure; and standard heart, which is about 90 or 95 per cent.

Senator CALDER. That makes seven or eight different grades. What price was received for the better grade of timber sold to the Shipping Board? That depends, of course, upon the size?

Mr. SANFORD. You mean upon the heart-faced grade, Senator?

Senator CALDER. Yes.

Mr. SANFORD. For the heart-faced grade the highest price, I believe, was $5 or $6. I am not certain about that.

Senator CALDER. The prices of your different grades depends, of course, upon the size of the timber?

Mr. SANFORD. The size of the timber and the difficulty in getting it out.

Senator CALDER. You were furnished a schedule calling for a certain number of pieces of certain sizes, coming down almost to board sizes, were you not?

Mr. SANFORD. Yes.

Senator CALDER. And you quoted prices on the different grades, or the total price on each schedule?

Mr. SANFORD. On each schedule; an itemized price for each itemized schedule. Here are some: $24.63. $21.90——

Senator CALDER. So much a thousand feet?

Mr. SANFORD. A thousand feet.

Senator HARDING. Is there more or less mill cost in producing ship timber than in producing merchantable?

Mr. SANFORD. Very much more, for this reason: We are not getting our ship timber from our normal logging operations. In my instance I have a small mill; I only cut about 40,000 feet a day. I have had to buy several ox teams, and it cost me around $2 a bushel for corn to feed them.

Senator NELSON. What do you pay for the ox teams?

Mr. SANFORD. They cost me about $600 apiece.

Senator NELSON. $600 for a single ox?

Mr. SANFORD. $600 for the team.

Senator NELSON. They are dearer than mules, then, are they not?

Mr. SANFORD. They are, but they will do the work better, Senator. That has necessitated my laying off one of my skidders. I could log very much cheaper with them. I am going out from 2 to 3 miles from my railroad after the large trees to get the larger timbers.

Senator HARDING. I think the increased timbering expense is very manifest. I was asking about the mill expense.

Mr. SANFORD. Oh, the mill expense? The mill expense is somewhat larger, because of the fact that we have to handle these large timbers in the mill. My mill is only made to cut timbers 40 feet long, and when I cut any of the 42's or 44's or 50-foot timbers I have to put that log on the carriage, cut it back to 40 feet, run the carriage back, slide the log up on the carriage, and cut it in that way. It takes me at least twice as long to saw up one of those logs over 40 feet long as it would if I had it in two lengths.

Senator HARDING. What percentage of them are in these great lengths?

Mr. SANFORD. I would not answer that. Probably 20 per cent are over 40 feet long—no; I do not think there are that many, probably from 10 to 15 per cent. That is merely a guess, however, Senator.

Senator JONES. What was your minimum wage in 1913 for the colored labor?

Mr. SANFORD. I think the least I paid was about $1.50 a day.

Senator JONES. What is it now?

Mr. SANFORD. About $2.

Senator JONES. An increase of 50 cents a day. What was your highest wage for colored labor in 1913?

Mr. SANFORD. About $2.50.

Senator JONES. What is it now?

Mr. SANFORD. $3, I believe, or $3.50; I am not sure which.

Senator BANKHEAD. Have you had much trouble with labor?

Mr. SANFORD. I have not had much, Senator.

Mr. CALDER. You have an open shop, have you?

Mr. SANFORD. As far as I know, there is not any unionized mill in the South.

Senator JONES. Does this labor you referred to a moment ago board itself or do you board it?

Mr. SANFORD. They board themselves.

Senator JONES. Do they furnish their own housing accommodations?

Mr. SANFORD. No; I furnish the houses for them. I build the houses for them.

Senator JONES. Do they pay rent?

Mr. SANFORD. They pay me $2 or $3 a month.

Senator JONES. Then they do furnish their own housing accommodations?

Mr. SANFORD. Oh, yes, sir; they do.

Senator JONES. And board themselves?

Mr. SANFORD. Board themselves.

The CHAIRMAN. Is there any difficulty about housing?

Mr. SANFORD. No trouble, because if they need any houses I build two or three, and always have enough to supply all of them.

Senator NELSON. I suppose you allow the colored people to build shacks of the refuse lumber there?

Mr. SANFORD. I build the houses for them, Senator, and I charge them rent. The colored help pay from $2 to $3 a month, and the white help pay from $4.50 to $6 a month.

Senator BANKHEAD. It depends upon the size?

Mr. SANFORD. Upon the size of the house.

Senator BANKHEAD. How many rooms have the houses for colored labor?

Mr. SANFORD. From two to three rooms.

Senator BANKHEAD. And for the white labor; about four?

Mr. SANFORD. From three to six.

Senator BANKHEAD. About the same as it is in the coal mines in the South?

Mr. SANFORD. Just about the same, Senator.

The CHAIRMAN. Is there any other question to ask Mr. Sanford? If not, I believe that is all, Mr. Sanford.

We will hear Mr. Browne.

STATEMENT OF MR. FRANK A. BROWNE, GENERAL PURCHASING OFFICER, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

The CHAIRMAN. Mr. Browne, please state your name and place of residence.

Mr. BROWNE. Frank A. Browne, general purchasing officer, Emergency Fleet Corporation. I live in Washington.

Senator BANKHEAD. You mean Washington State?

Mr. BROWNE. Washington, D. C.

The CHAIRMAN. How long have you lived in the city.

Mr. BROWNE. Since April 10, 1917.

The CHAIRMAN. Where did you reside before that?

Mr. BROWNE. Buffalo, N. Y.

The CHAIRMAN. What was your business, Mr. Browne?

Mr. BROWNE. I was manager of the Iroquois Works of the General Asphalt Co.

The CHAIRMAN. Have you ever had any experience in shipbuilding?

Mr. BROWNE. I served an apprenticeship of two years in seamanship and engineering with the Massachusetts Nautical Training School in 1900 and 1901. I graduated from the Massachusetts Institute of Technology, Boston, Mass., as a naval architect in 1906. From 1906 to 1911 I was with the Panama Canal at Panama. I designed some of the shops down there and the principal machines for operating the locks of the Panama Canal. From 1911 to 1914 I had charge in the United States for the Panama Canal of the construction and inspection of machinery for operating the locks of the Panama Canal, including the hydroelectric station, the transmission line, the coaling plants, and emergency dams, as well as the machines actually operating the locks themselves.

From 1914 until April 10, 1917, I was manager of the company which I mentioned, and on April 10 I was employed by the Shipping Board—not the Emergency Fleet Corporation, because it was not in existence at that time—as mechanical engineer. On April 15, when the Emergency Fleet Corporation was organized, my title was changed to general purchasing officer of machinery.

The CHAIRMAN. Were you engaged by Gen. Goethals?

Mr. BROWNE. No, sir; I was engaged by Mr. Eustis—Mr. F. A. Eustis—who was special agent for the United States Shipping Board at that time. I was afterwards made assistant general purchasing officer.

The CHAIRMAN. Where is Mr. Eustis from?

Mr. BROWNE. I have heard that he was from Boston. I am sure I do not know definitely.

The CHAIRMAN. Did you know Gen. Goethals on the canal?

Mr. BROWNE. Yes, sir. I was made general purchasing officer on September 12, 1917. Before that I was assistant general purchasing officer, from June 1, 1917, to September 12, 1917.

The CHAIRMAN. Who was the purchasing officer then?

Mr. BROWNE. Col. R. E. Wood, who is now supposed to be in France.

The CHAIRMAN. How many assistants have you now, Mr. Browne?

Mr. BROWNE. On December 20 I had 303 persons in the purchasing division.

The CHAIRMAN. Are those assistants distributed throughout the districts?

Mr. BROWNE. I have about 75 persons in my office in Washington, and the remainder are field officers and inspectors in the field.

The CHAIRMAN. The inspectors are under you also?

Mr. BROWNE. I have in charge the inspection of lumber—southern pine lumber—and the inspection of machinery and apparatus to be placed in ships.

Senator NELSON. For wooden hulls?

Mr. BROWNE. Both wood and steel.

The CHAIRMAN. You have not any machinery in place yet?

Mr. BROWNE. In the hulls?

The CHAIRMAN. Yes.

Mr. BROWNE. I think not as yet.

The CHAIRMAN. Have you had to do with the purchasing of the equipment of the hulls; that is, the machinery and the general equipment?

Mr. BROWNE. Yes; it is the duty of the purchasing division to purchase certain machinery and equipment for ships contracted for on a complete ship basis; to purchase lumber for wooden ships, steel for steel ships, raw and semifinished materials for machinery contracts; to inspect machinery and materials in process of manufacture, except hulls; and to arrange for production and delivery of materials at proper places and times.

The CHAIRMAN. Do you make contracts for the machinery?

Mr. BROWNE. I do not actually make the contracts. I make a recommendation to the general manager, who makes the contracts in the same manner that ship contracts are made; that is, the contracts are signed, under the present arrangement, by the vice president and general manager. They are not signed by me. However, I place what are called purchase orders. Purchase orders are similar to the purchase order of commercial use, and I sign those purchase orders, but only after the approval of the vice president and general manager in each case.

Senator NELSON. Do you have anything to do with fixing the price or arranging for the price of these things? Do you carry on negotiations about that?

Mr. BROWNE. I carried on the negotiations with regard to fixing the price of southern pine, for instance, but not in cases in which the price was fixed by the War Industries Board.

Senator NELSON. And you recommend these prices then to your superiors?

Mr. BROWNE. Yes, sir.

Senator NELSON. And they act on your recommedation?

Mr. BROWNE. Yes, sir.

Senator NELSON. You then recommended this average price of $40 to $42 a thousand for this southern pine supply?

Mr. BROWNE. I made the recommendation in that particular case; yes, sir.

Senator NELSON. Whom did you deal with then? With the association through its officers?

Mr. BROWNE. We dealt with the Southern Pine Emergency Bureau.

Senator NELSON. But you made no effort to deal with individual lumbermen, independent men?

Mr. BROWNE. No, sir. It is an organized industry, and it was very much simpler to deal with it than it was to deal with the individual lumbermen.

Senator NELSON. Do you know whether there are many lumbermen outside of the organization in the South?

Mr. BROWNE. I think the Southern Pine Association is supposed to represent about 60 per cent of the industry. Its enemies say not more than 40 per cent.

Senator NELSON. Was that organization formed after the war commenced?

Mr. BROWNE. I think not. The dealings we have had have not been with the Southern Pine Association, but with the Southern Pine Emergency Bureau, and that emergency bureau is supposed to represent all parties, not only the members of the Southern Pine Association, but so-called independents.

Senator NELSON. That was organized after the Shipping Board was established, was it not?

Mr. BROWNE. I do not know when it was organized.

The CHAIRMAN. Who is your assistant in the fourth district?

Mr. BROWNE. I have an assistant at New Orleans, La., Mr. W. J. Haynen; I do not think he is in the fourth district. I do not remember the numbers of the districts. There are 10 districts. He is in New Orleans.

The CHAIRMAN. New Orleans is in the fifth district. Warren Johnson, New Orleans, La., is the district officer.

Mr. BROWNE. The district officers are not in my organization.

The CHAIRMAN. I understand that; but that is the fifth district that you speak of now; New Orleans is in the fifth district. The headquarters of the other district is at Jacksonville. That is the fourth district.

Mr. BROWNE. Mr. Haynen has various production officers located at different points in the South. There is one in Jacksonville, but I do not recall his name.

Senator NELSON. Mr. Sanford spoke about the prices here, but there is one thing I forgot to ask him, and I do not know whether he made it clear. You may perhaps be able to clear it up. Were these prices for the lumber delivered on board the cars or were they for prices delivered at the yards?

Mr. BROWNE. Those prices were for delivery on board cars.

Senator HARDING. Will you tell the committee how you arrived at the price that was arrived at with that emergency bureau?

Mr. BROWNE. The price of $35 per thousand obtained until the latter part of September. I do not know how that price was arrived at; I did not have anything to do with it. We felt that in view of the complaints of the lumbermen in regard to the price, in order to stimulate production we should seriously consider giving them an advance in price. We consulted the Federal Trade Commission and obtained from them the average cost of lumber at a number of representative mills, probably 50. We obtained statements from the

lumber producers themselves as to what they considered was an average cost of getting out ship schedules—not the entire run of mill product, but just simply the ship schedule. We considered the advance very carefully and decided that production would be increased by granting a price of $40 a thousand, average, instead of $35. At that time the lumber producers promised to use unusual means to stimulate production, and this was one of the reasons for raising the price. They promised to go far ahead of their normal logging operations, to buy ox teams if necessary, to haul logs from distant points, and to use any other means which they could to increase production.

Senator NELSON. That arrangement was made in December, was it not?

Mr. BROWNE. No, sir; it was made September 20, I think.

Senator HARDING. Was there a failure to meet the Emergency Fleet Corporation's requirements prior to that time? Was there a falling down in the program under the $35 schedule?

Mr. BROWNE. The Fleet Corporation did not receive lumber as fast as it was needed. There were various reasons for that. One reason was that the method of payment on ship contracts was based on the completion of certain parts of the work. For instance, when the yard was completed a certain per cent was paid, when the keels were laid another per cent was paid, and when the frames were up, another per cent was paid. Now, if a yard had 10 ways it was to their advantage to lay down 10 keels all at once, to frame up 10 ships all at once. The laying of those 10 keels at once and framing up 10 ships at once required immediately the bulk of the large timber going into the ships. This meant that the producers of lumber had to get out at the earliest possible date all of the large timber, and that was one of the causes of the shortage.

Senator HARDING. Is it your observation that laying all these keels at one time expedited the delivery of any ships?

Mr. BROWNE. I think not, because it was very difficult to get the lumber in that sequence.

Senator HARDING. And then the shipbuilder laid more keels than necessary, in order to advance his payments? Is that true?

Mr. BROWNE. I think that is true.

Senator BANKHEAD. I understood Mr. Sanford to say a while ago that for commercial lumber—for lumber that went to the trade—they were receiving from $5 to $20 a thousand more than for the Government contract. Do you know anything about that?

Mr. BROWNE. It must be borne in mind that throwing into the market, say, 350,000,000 feet of the highest grade lumber will practically make the market; so that the Shipping Board has been responsible, possibly, for any increase in price, because of its great demand. If the Shipping Board had not been in the market, I doubt if the market would have gone up at all.

Senator BANKHEAD. What I have reference to is that character of lumber that the Shipping Board did not use—the commercial lumber. He said it was worth from $5 to $20 a thousand more than the lumber that the Shipping Board demanded.

Mr. BROWNE. I do not think there was any similar schedule of material ever gotten out by the southern-pine people until this ship was built, and so I do not think there was any precedent for the price.

Senator BANKHEAD. Well, that is not exactly the point I was trying to make. The point I tried to make was, why and for what reason these sawmill people got from $5 to $20 a thousand feet more than you gave for your timber when it is very much inferior. Would not that argue or tend to prove that your price was not too high, considering the market?

Mr. BROWNE. Taking everything into consideration, I think that our price is a very fair one.

Senator BANKHEAD. Well, I think so, too. But from the statement that he made, that they were giving from $5 to $20 more a thousand for other lumber, I think that would tend to prove that your price was a fair one to the Government.

Mr. BROWNE. I did not understand Mr. Sanford to state that they were getting from $5 to $20 more per thousand for an inferior grade of lumber.

Senator BANKHEAD. Well, I do not know that it was an inferior grade; it was merchantable lumber, the general output, for Government cantonments and other places like that.

Mr. BROWNE. There is no comparison in the price of cantonment lumber and ship lumber. Cantonment lumber consists of boards 2 by 4 and 2 by 6—small lumber. Now, the price of that is very low as compared with ship lumber.

Senator BANKHEAD. Well, I do not know what character of lumber he referred to.

Senator JOHNSON. Senator Bankhead is correct in saying that the price was from $3 to $20 lower than the price of commercial lumber.

Senator BANKHEAD. That is the way I understood him.

The CHAIRMAN. He said, I believe, the same lumber as used in commercial transactions.

Mr. BROWNE. I tried to make it clear that I thought that that price was due largely to the very large orders that we had placed in the market, and that we had made the market.

Senator JOHNSON. Well, that would demonstrate, would it not, that you were getting an exceedingly low price on the contract?

Senator BANKHEAD. That is the point I was trying to make.

Senator HARDING. I did not get the same idea that the other members of the committee did. I did not understand that commercial lumber was the same as other lumber; but I understood that it was the price to the private buyer that was that much higher.

Senator BANKHEAD. Well, is Mr. Sanford still here?

Senator HARDING. Yes. We might recall him and have him explain.

The CHAIRMAN. Yes. Mr. Sanford, will you explain to the committee what you meant?

Mr. SANFORD. The idea that I intended to convey, Mr. Chairman, when I answered the question as to what commercial lumber was was commercial lumber of the same grade that we are furnishing the Shipping Board.

Now, I might say further, since the $35 price has been mentioned by Mr. Browne—that in May, when that price was fixed—Mr. Browne was not then in the position that he is occupying now. Timbers—or the schedule was figured over and the prices put out for those different items that we were getting at that time commercially. The fact that the Shipping Board was buying lumber

had absolutely nothing to do with the price we were getting for commercial lumber of the same grades and sizes at that time. But after that price had been made up we were all patriotic and wanted to do everything we could. We cut that price 14 per cent, and made an average price of $35 a thousand. The price figured at that time was $40.85 a thousand, figured up on a strictly commercial basis of what we were getting for timbers at that time.

Senator NELSON. That was the price at the mills?

Mr. SANFORD. That was the price at the mills. We cut that price 14 per cent and made it $35, because we wanted to do what we could to help. We also stipulated——

Senator HARDING. Let me make this suggestion: You are speaking now, are you, of shipbuilding timber sold commercially to the private buyers?

Mr. SANFORD. There were very few ships being built at that time, but it was timber of the same size sold for mill construction, or for ships, or for railroads, or for any other purpose that they might be used for.

Senator JOHNSON. Were you producing them at that time, Mr. Sanford?

Mr. SANFORD. Yes.

Senator JOHNSON. And producing them in considerable quantities?

Mr. SANFORD. In very large quantities; and the value of our product at that time was well known.

Senator JONES. Was that $35 price that you made below cost?

Mr. SANFORD. No, Senator Jones.

Senator CALDER. Were you getting the 14 per cent higher price in general trade than you were in selling to the Government?

Mr. SANFORD. Yes; we were.

Senator CALDER. You were actually getting it?

Mr. SANFORD. We are actually getting it now. At that time we provided that if there was an increase in the cost of labor or material it was to be adjusted afterwards; and at the time we had the negotiations with Mr. Browne, in September, it was conclusively shown that our increased cost of labor and material was approximately $3.60 a thousand, I think it was. The increased value of the lumber, on account of having sizes increased—larger sizes—which were of more value than the same items were before in the smaller sizes, increased something like $3.

And that was the reason that the price was increased to $40.

Now, there were a great many—I say a great many—there were a number of private concerns that were building ships—had started to build ships during the summer—and they paid, and were paying in September, when we made this last sale to the Shipping Board, as high as $50 a thousand, and in some instances $55 a thousand, for the same lumber that we agreed to furnish to the Shipping Board at $40 a thousand.

Senator HARDING. Was the increased price to apply to previous deliveries?

Mr. SANFORD. It was not at the time—not in September. But in October—October 20 I think it was—we brought up evidence showing what it was costing us additional for labor, additional for material, and everything of that kind, and the original 100 schedule, as

we called it in our correspondence, was increased to the $40 price, which was less than we were entitled to according to our first agreement, because it did not cover entirely the increased cost of labor and material.

Senator JOHNSON. Were you turning out this sort of lumber in 1916, 1915, 1914, and 1913 also?

Mr. SANFORD. Yes, sir; we always turned out that quality of lumber.

Senator JOHNSON. Can you state the prices of it during those years?

Mr. SANFORD. I do not believe that I could.

Senator JOHNSON. Approximately; I do not mean exactly.

Mr. SANFORD. Well, I think the approximate value of that grade of lumber, I would say, during those three years was $40—about $40 or $45.

Senator JOHNSON. That is, in 1913, 1914, 1915, and 1916 it would be——

Mr. SANFORD. About $40 or $45.

Senator CALDER. And the price was no higher in 1917 than it was in those years?

Mr. SANFORD. Commercially it was. Commercially we can get for this same lumber we are furnishing the Shipping Board $45, $50, or $55. That is why we urged so strongly that they put the embargo on, because there were some mills not patriotic enough to furnish the lumber for the Government rather than commercially, because they could get more money for it commercially.

Senator CALDER. Well, if the price averaged $40 for three years prior to the war, you are actually selling it to the Government lower than you would have sold it in the three years previous to the war?

Mr. SANFORD. I think we were. That lumber has never been very low. It is the highest grade of lumber we have, and it is what is used in the mill construction.

Senator CALDER. It is clear pine?

Mr. SANFORD. It is the highest grade; half yellow pine; the highest grade we have.

Senator Bankhead. I would like to say, Mr. Sanford, that my only purpose in asking those questions was to demonstrate that the Government is not paying an excessive price for this lumber, as has been so frequently charged.

Mr. BROWNE. I think the price has been very reasonable.

Senator BANKHEAD. That is what I have been trying to bring out.

Mr. BROWNE. On the other hand, I think the lumber dealers are making a very handsome profit.

Senator BANKHEAD. I have no doubt they are.

Senator JOHNSON. How much would you say, just as a matter of curiosity, the profit was? For instance, this lumber which it has just been stated was sold at a low price of $40 to $42 a thousand, what does it cost to produce?

Mr. BROWNE. I do not know. The run of mill cost is probably about $19. Now, this large timber costs more to produce, on account of the unusual means these people are taking to get out this lumber. I am not sure I could state how much it costs.

Senator BANKHEAD. Mr. Sanford ought to be able to answer that.

Senator HARDING. This testimony brought out the increased price of lumber due to the increased sizes. If I recall Mr. Ferris' testimony correctly, he said that, except in one or two instances, there were not any increases in the sizes of timbers, but in the modified ship there were more of them. Is that your understanding of it?

Mr. BROWNE. I think that was true up to the time that schedule No. 23 was reached. Schedule 23 carries very much larger sizes. Schedule 23 was issued on November 1, 1917. It superseded schedule 18, which, in turn, superseded schedule No. 1.

The CHAIRMAN. Will you give the dates of those different schedules?

Mr. BROWNE. Schedule No. 1 was issued May 20, 1917; schedule 18 is dated July 9, 1917; schedule 23 is dated November 1, 1917.

Senator NELSON. Will you put those schedules in evidence and then we can see what they are?

Mr. BROWNE. Yes; I will do so.

The CHAIRMAN. The schedules will be filed and the committee can later determine whether they shall be printed in the hearings.

Senator HARDING. I would like to make one other point, Mr. Chairman. I want to bring out distinctly whether the shipbuilders have muddled this situation by drawing for the larger timbers and the wholesale laying of keels in order to get advance money from the Government?

Mr. BROWNE. I think that has been true in some cases.

Senator HARDING. How many would you say, Mr. Browne?

Mr. BROWNE. The contract will show—and you have copies of all ship contracts—which contracts require payment by the methods which I have stated; that is, that the contractor shall be paid such a per cent on the laying of the keels, such a per cent on framing, and so on. Now, those are the contracts which gave difficulty, on account of requiring all the large timbers to be furnished practically at once. I could not state what percentage of the contracts required payment in that manner.

Senator HARDING. But such contractors have, in fact, embarrassed the program by following a selfish policy?

Mr. BROWNE. I do not think there is any doubt about that.

Senator BANKHEAD. Well, have you any control over that situation?

Mr. BROWNE. Steps have been taken to remedy that. It is done in some cases by cutting down the number of ways, I believe, and we have taken steps to control that.

The CHAIRMAN. If the contracts have altered the plans of payment so that the lumber would have been delivered as the shipyards needed it to proceed with the ships that have been begun, would it have been less difficult for the mills to supply the timber than to have to pick out the big timbers first and take up the other kind later.

Mr. BROWNE. Well, you must have a considerable quantity of large timber first in order to build the ship at all. You must have the keels and the keelsons and the frames and the flitches, and those are the largest items in the ships. You can not proceed with the construction of the ship until you have those. But if you have a number of ships you can proceed, using the smaller lumber on the first

ship while you are laying your keels on the second ship, and you can relieve the situation by carrying on your work in such a manner that you can use up the smaller lumber.

Senator NELSON. Well, would it not expedite the getting out of vessels if they concentrated their labor forces on a few ships that they have laid the keels on, rather than have a lot of them under way? Could they not get out ships more quickly in that way?

Mr. BROWNE. I think you probably could get ships out more quickly under that arrangement.

Senator NELSON. Rather than have a multitude of ships on the ways at once, it would be far better to have a few on the ways and concentrate their forces on those?

Mr. BROWNE. Yes, I think so; and we are compelling them to do that.

Senator NELSON. But they have not done it yet, have they.

Mr. BROWNE. They did not at first.

Senator NELSON. Are you taking steps to have them do that now?

Mr. BROWNE. I think that is being done, but that is something that I have not anything to do with.

Senator JONES. Well, if you have nothing to do with it, have you investigated to see whether the shipbuilders were not following that policy?

Mr. BROWNE. I have not made an investigation.

Senator JONES. Well, how do you know, then, that they were not following that policy?

Mr. BROWNE. Because the matter was brought up about two months ago, and the statement was made by Admiral Bowles, I believe, that the shipbuilders have been permitted to go along in that fashion, but that that condition would not be permitted to go on hereafter.

Senator JONES. Well, do you think these practical shipbuilders would not follow the most expeditious course in connection with the building of ships?

Mr. BROWNE. I think that some shipbuilders would undoubtedly follow out the course which would get them the most money at the earliest date.

Senator JONES. Well, they could not get that without getting the most ships, could they—unless it was like some of the contracts we have had mentioned here.

Mr. BROWNE. I think some question of financing is involved. I think it may be that some of the shipbuilders did not have sufficient money to properly finance their contracts and that they were practically forced to do this in order to get money. That is my opinion.

Senator JONES. Now, referring to these keels, have you ordered keels from the Pacific coast?

Mr. BROWNE. We have ordered for ships on the Atlantic and Gulf coasts approximately 60,000,000 feet of Douglas fir.

Senator JONES. That would be keels for how many ships?

Mr. BROWNE. We have ordered lumber for over 200 Atlantic and Gulf coast ships. Those orders were placed about the middle of November.

Senator NELSON. That is for fir?

Mr. BROWNE. These orders were placed as soon as this schedule [indicating] came out, because we immediately saw that we could not hope to get larger sizes in this schedule in southern pine within a reasonable period.

Senator JONES. Now, you say that will furnish the largest timbers for about 200 ships?

Mr. BROWNE. Yes, sir.

Senator JONES. Have you got this timber started on the way?

Mr. BROWNE. Well, we have already shipped about seven or eight million feet, and we expect to have the entire amount shipped in about 60 days from to-day.

Senator NELSON. In about what time?

Mr. BROWNE. Sixty days from to-day.

Senator NELSON. What price do you pay for that timber out there?

Mr. BROWNE. The cost to us delivered is less than for southern pine.

Senator NELSON. Delivered, you mean, at the shipyard?

Mr. BROWNE. Yes.

Senator NELSON. The cost delivered at the shipyard is less than the cost of southern pine at the mills?

Mr. BROWNE. In fact, the average price is about $15 per thousand less than the cost of southern pine delivered at the shipyard.

Senator JONES. Well, what about this suggestion, that these contracts for building ships on the Atlantic and the Gulf coasts be transferred to the Pacific coast?

Mr. BROWNE. There is a transportation problem involved in getting this large amount of lumber from the Pacific coast, because the requirements for the ships themselves are not the only requirements that we have. We bought a large amount of lumber from the Pacific coast for these fabricated steel-ship yards, and it may become a transportation problem. We are shipping around by water as well as by rail.

Senator JONES. Well, I know that, and that is the reason I asked the question. You suggested a moment ago that you would probably have all this timber here in 60 days.

Mr. BROWNE. We hope to do it, and we will do it unless the transportation problem prevents.

Senator JONES. Well, have you investigated that question?

Senator HARDING. I do not think, Senator Jones, that Mr. Browne understood your question about the transfer of the building of ships.

Senator JONES. Well, it was suggested here that many of these contracts that you entered into for the construction of wooden ships on the Atlantic and Gulf coasts, on account of the difficulties in the matter of transportation and on account of the difficulty of getting this large timber here, would be transferred to the Pacific coast and filled out there; that is, the ships be built out there instead of here.

Mr. BROWNE. I have not any knowledge as to that—as to whether those contracts will be transferred.

Senator JONES. Well, have you investigated the matter of transportation, so that you have any reasonable assurance that transportation will be available when you want these timbers?

Mr. BROWNE. Before these orders were placed on the Pacific coast we carefully investigated, and we were promised that we would be provided with transportation facilities.

Senator JONES. Promised by whom?

Mr. BROWNE. Promised by the railroads.

Senator JONES. Well, the Government has control of that now?

Mr. BROWNE. Yes.

Senator JONES. And it seems to me that you ought to determine promptly what you are going to do, because if you wait 60 days and then do not get the timber by reason of lack of transportation, and you have to transfer them out there, you will have another two months' delay. But it seems to me that you ought to be able to arrange pretty definitely your transportation or else find out that you can not get it.

Mr. BROWNE. We did arrange for it, as far as arrangements could be made before the orders were placed.

The CHAIRMAN. What do you pay for that Douglas fir out there?

Mr. BROWNE. I think the price f. o. b. was about $38.

Senator NELSON. How much?

Mr. BROWNE. About $38 per thousand.

The CHAIRMAN. And what is the freight on it to the seashore—say to Mobile?

Mr. BROWNE. I think it is about $25.

The CHAIRMAN. That brings the cost up to about $63 a thousand?

Mr. BROWNE. Yes, sir.

Senator NELSON. What is the average freight of the southern pine to the yards?

Mr. BROWNE. I do not know. I think it is about $8 from Mobile to points around New York.

Now, please understand that this lumber bought from the Pacific coast is only the largest and most difficult items, and the price we pay bears no relation to the $40 average which we are paying for southern pine to-day, because that $40 average includes a large amount of smaller and cheaper lumber.

The CHAIRMAN. What do you pay for this southern pine that you speak of on the Pacific coast?

Mr. BROWNE. Well, we figure out, as I stated, that the price delivered will be approximately $15 less.

Senator NELSON. The difference between the southern pine and the Pacific fir for those heavier pieces, the larger pieces?

Mr. BROWNE. Yes.

The CHAIRMAN. But you actually pay for the Southern pine $40 a thousand feet, do you not?

Mr. BROWNE. Well, that is the average price. The unit prices are, as stated in this book [indicating], and the unit prices run up as high, I think, as $100 a thousand feet for certain items?

Senator NELSON. Well, what is the price for southern pine of those large sizes that you get for $38 out on the Pacific coast?

Mr. BROWNE. I could not give you that without picking out all the items we bought and averaging them in southern pine, and I have not done that.

Senator NELSON. Your prices were an average, then; you did not have a special price for each particular grade?

Mr. BROWNE. The price was an average one.

Senator NELSON. For all of them. Well, in view of the discrepancy in prices between the southern pine and the fir out there, would it not be a matter of economy to construct wooden ships out there, owing to the difference in the price of lumber?

Mr. BROWNE. It would undoubtedly be more economical to build Douglas fir ships on the Pacific coast than to ship Douglas fir lumber

from the Pacific coast to the Atlantic and build the ships on the Atlantic coast.

Senator NELSON. Yes.

Senator BANKHEAD. If you were to build on the Pacific coast it would involve also the construction of shipyards. You have no shipyards available for building them now—without building new ones?

Mr. BROWNE. Of course, we have a number of established wooden shipyards.

Senator BANKHEAD. I thought you had them all filled up. I did not know about that.

Mr. BROWNE. Yes; they are filled up, I understand.

Senator JONES. From whom did you get that understanding, Mr. Browne?

Mr. BROWNE. I think if they were not filled up they would get some contracts.

Senator JONES. Well, I have had from time to time requests from them for contracts, and I have not been able to get any contracts for them until this hearing started.

The CHAIRMAN. Have you had any trouble in getting lumber on the Pacific coast?

Mr. BROWNE. We have had trouble in getting lumber; yes, sir.

The CHAIRMAN. Did you not have trouble in the woods out there?

Mr. BROWNE. Yes; there was a strike, I believe.

The CHAIRMAN. Do you know whether that has been settled or not?

Mr. BROWNE. I think that strike has been settled.

The CHAIRMAN. Do you know how long it lasted?

Mr. BROWNE. No; I do not.

The CHAIRMAN. Do you know how much delay there was on account of lack of material?

Mr. BROWNE. I think the delay was comparatively small, because the shipbuilders had enough lumber to carry them through while this strike was going on. I do not think the strike lasted very long, not more than two or three weeks, I think.

Senator JONES. With regard to the price of lumber on the Pacific coast, Mr. Browne, I want to ask you this question: I have here a letter from one of the shipbuilders out there, in which he says this—and by the way, he is one of the shipbuilders who wants to get some contracts. He has contracts for two ships, and he claims that he has facilities for building six; so he is not filled up. Now, he says this: "The Government fixed a price of $35 per f. b. m." What does that mean—can you tell me?

Mr. BROWNE. Feet board measure.

Senator JONES. Feet board measure, yes; "$35 per f. b. m. for a complete ship built, and our contracts were based on that price, and that price governed for a few months, until the Government itself made a higher price, of $40 and $42 f. b. m., for about 40,000,000 feet to be shipped from Puget Sound to Atlantic coast yards." Now, you fixed a price out there of $35 per thousand feet board measure?

Mr. BROWNE. We fixed the price in this way—you could hardly call it fixing the price—when the wooden ship contracts were awarded on the Pacific coast, the statement was placed in the contract that we would protect the shipbuilder on a price of $35 per thousand average for the lumber going into the ship. At that time we took an option

on lumber for 60 ships at a price of $35 per thousand average from the lumber producers.

That option was never exercised. The reason for that was, apparently, that the shipbuilders themselves could get the lumber at a less price, and, therefore, there was no particular reason why they should come to us for protection; in other words, why they should ask us to buy the lumber for them at $35 per thousand.

Now, that option expired. We had an individual contract out there for six ships, at an average of $30 per thousand, and that contract is being filled now.

Recently, about two weeks ago, we placed an order for the Benicia Shipbuilding Co. at an average price of $40 per thousand. That is the only case, and that is, I think, less than two weeks old, where we have ever paid a price of over $30 per thousand for ship lumber on the Pacific coast. The lumber which the writer of that letter has in mind, I presume, is certain lumber which I mentioned, to the extent of about 60,000,000 feet, which we bought recently.

Senator JONES. Yes; he says it was bought recently.

Mr. BROWNE. We bought it recently for ships on the Atlantic and the Gulf coasts.

Senator NELSON. That is these other sizes?

Mr. BROWNE. The—that is the sizes in schedule No. 23.

Senator NELSON. The items that they have difficulty in filling is the southern pine?

Mr. BROWNE. Yes; as I stated, there is no relation between the average price of ship timber on the Pacific coast, or anywhere else, and the prices we paid for the very large items of lumber we bought for the shipbuilders on the Atlantic and Gulf coasts, because it is a different size of timber. Now, we paid, as I stated—I think it was $38 per thousand f. o. b. mill for the lumber, which the writer of that letter mentions.

Senator JONES. He says $40 to $42. Do you think he might be mistaken?

Mr. BROWNE. I may be mistaken; it may have been $40.

Senator NELSON. That is for those extra sizes?

Mr. BROWNE. Yes, sir.

Senator JONES. Then I will ask you about another matter that he mentions. He says this [reading]:

> About the same time, several private yards not doing United States work, one of which is the Foundation Co. in Tacoma, building schooners for the French Government, commenced to bid for lumber, and they are bidding up to $45 per f. b. m., and consequently this one shipyard in Tacoma, building 20 ships, which will require about 35,000,000 feet, is taking the lumber away from the Government yards, as you will readily see.

Do you know anything about that?

Mr. BROWNE. I have heard that the Foundation Co. has a contract for owners other than the United States Government for ships on the Pacific coast.

Senator JONES. Well, do you know anything about their bidding on the lumber and giving a price up to $45 a thousand?

Mr. BROWNE. I think it is probable that they pay whatever is necessary to get the lumber.

Senator JONES. Well, do you not think that that will interfere with the Government's shipbuilding program?

Mr. BROWNE. I want to say that I think we have protected ourselves against matters of that sort by our embargo letter of December 6, which places an embargo on Douglas fir lumber for shipbuilding purposes. The embargo reads as follows, in substance [reading]:

That you place at the disposal of the United States Shipping Board Emergency Fleet Corporation all Douglas fir lumber produced by you having a face 12 inches wide or over and a length of over 24 feet or longer, or any size having a length 30 feet or over, and deliver the same or parts thereof in such quantities and at such times and to such persons as may be specified in orders hereafter to be given you; and that you do not sell or dispose of said lumber, or any part thereof, unless you first obtain authority from the United States Shipping Board Emergency Fleet Corporation, or the priority committee of the War Industries Board.

Senator JONES. And you think that will meet the situation that he mentions in his letter?

Mr. BROWNE. That should place at our disposal all of the shipbuilding lumber on the Pacific coast, and by placing it at our disposal it enables us to parcel out the lumber to the places where it is needed. If it is needed at the shipyards it goes to the shipyards; if it is not needed at the shipyards or by our own contractors then we have no objection to other people getting it.

Senator JONES. Yes; that is what he suggests further on in this letter, so that the Government will see to it that the yards which have Government contracts are supplied first.

Mr. BROWNE. That embargo went into effect December 6, and has hardly been in effect long enough to find out whether it is in suitable form; that is, whether we should not reduce the sizes of the lumber stated, or whether we should not embargo the entire output, but——

Senator JONES (interposing). Well, you ought to embargo whatever is necessary to the construction of the Government ships, ought you not?

Mr. BROWNE. We intend to do so, and as soon as we find out whether this is effective we will make whatever changes are necessary in the embargo.

Senator JONES. Of course, I do not want to injure this shipbuilding company at Tacoma, but the interest of the Government should be paramount to everything else.

Mr. BROWNE. It is; and, in fact, no private shipyards can build ships in the United States at the present time, as I understand it, unless——

Senator JONES (interposing). Well, they have been permitted to build them of 2,000 or 2,500 tons?

Mr. BROWNE (continuing). Unless they can obtain material without interfering with the shipbuilding program of the United States Shipping Board Emergency Fleet Corporation.

Senator JONES. Well, I think that is the proper policy. You said something about some lumber out there for $30 a thousand. I did not understand exactly to what you referred.

Mr. BROWNE. We placed a direct contract with a lumber company for six ship schedules at an average price of $30 a thousand.

Senator JONES. What class of ships were those? Were those of the Ferris type or the Hough type?

Mr. BROWNE. Ferris-type ships.

Senator JONES. You are sure of that?

Mr. BROWNE. Yes, sir.

Senator JONES. Do you remember where those contracts were being filled; where the yard is?

Mr. BROWNE. Do you mean the lumber?

Senator JONES. Where the yard is that is taking that lumber?

Mr. BROWNE. I know the name of the lumber mill, but not of the ship contractors. I can give you the name of the lumber mill, if you want it.

Senator JONES. I am not interested in that. I am interested in the name of the shipbuilding company. Can you find out about that?

Mr. BROWNE. Yes, sir.

Senator JONES. I wish you would do so.

The CHAIRMAN. Have you a schedule of the Pacific coast lumber, or does that schedule No. 23 cover that?

Mr. BROWNE. No, Mr. Chairman; schedule No. 2 is the Pacific coast schedule. I can file that.

The CHAIRMAN. All right.

Senator NELSON. Are you familiar with the lumber conditions out on the Pacific coast?

Mr. BROWNE. In a general way only. I know that they had no difficulty in getting lumber out there; that is we had not heard of it here, until recently, when our district officer at Seattle wired us stating that, in his opinion, unless we took immediate steps to prevent the export of lumber, and took whatever other steps were necessary to prevent private shipbuilders from getting the lumber, we would not have enough lumber for our own program, and that was the reason why we placed this embargo.

The CHAIRMAN. Is that all, Mr. Browne?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. Then the committee will excuse you, Mr. Browne. It is getting late, but Capt. Bookwalter probably wants to return to New York, and I believe that he can give us some further information on the subject of the use of the ferryboats in New York, and the situation as to transporting employees that Mr. Bloomfield referred to. The committee wil now hear Capt. Bookwalter.

Capt. Bookwalter, will you state your full name, your residence, and what business you are engaged in?

STATEMENT OF CAPT. CHARLES S. BOOKWALTER, DISTRICT OFFICER, SECOND DISTRICT, EMERGENCY FLEET CORPORATION, NEW YORK CITY.

Mr. BOOKWALTER. My name is Charles S. Bookwalter; I am district officer of the second district of the Emergency Fleet Corporation, in New York.

Senator NELSON. Your headquarters are in New York?

Mr. BOOKWALTER. Yes, sir.

The CHAIRMAN. And you are the district officer there. Have you had any experience in building ships?

Mr. BOOKWALTER. Yes, sir.

The CHAIRMAN. What experience?

Mr. BOOKWALTER. I was in the Navy for a good many years, and afterwards built steamers and barges on the Ohio River for a number of years; and when the war broke out I volunteered my services

to the Navy Department, and they put me into the Navy Department and sent me to the Emergency Fleet Corporation.

The CHAIRMAN. What kind of ships have you had experience in building?

Mr. BOOKWALTER. Wooden ones, and also have been inspector for the building of battleships for the Government in the Navy Department—steel ships.

Senator JONES. You never built any ships outside of naval vessels and the ships on the Ohio River?

Mr. BOOKWALTER. No, sir.

Senator JONES. How many ships did you build on the Ohio River?

Mr. BOOKWALTER. On the Ohio River I built several hundred barges, flats, and lighters, and I think three or four steamboats—wooden vessels on the Ohio River.

Senator JONES. But none of them were to go off the Ohio River?

Mr. BOOKWALTER. No, sir.

Senator JONES. That is all.

Senator CALDER. Capt. Bookwalter, are you a naval constructor?

Mr. BOOKWALTER. No, sir; I was in the engineering department in the Navy for 17 years. I left the Navy after 17 years of service.

Senator NELSON. You are in the engineering department?

Mr. BOOKWALTER. Yes, sir.

Senator NELSON. Civil engineer?

Mr. BOOKWALTER. No, sir; I was chief engineer of the *Georgia* when I left.

The CHAIRMAN. You are familiar with the yards and the progress of construction in your district, are you?

Mr. BOOKWALTER. Yes, sir.

The CHAIRMAN. When did you take charge of that district?

Mr. BOOKWALTER. The 15th of October.

The CHAIRMAN. Of last year?

Mr. BOOKWALTER. Yes, sir.

The CHAIRMAN. What are the difficulties that you find there that the builders have to contend with, and what remedies have you to suggest?

Mr. BOOKWALTER. Well, we have two difficulties. Of course, in the wooden shipbuilding construction the main difficulty has been with lumber, the large sizes of lumber; that is what has held us back there. And with the steel shipbuilding in certain districts our great difficulty, as I see it, is the transportation—to get the men to and from the works. This especially applies in my district, to yards on Staten Island and in that vicinity.

Senator NELSON. How many yards are there at Staten Island working for the Government?

Mr. BOOKWALTER. Well, there is the Staten Island Shipbuilding Co., the Johnson Shipyard, the Downey Shipbuilding Co., and then the little island off the end of Staten Island, between there and Elizabethport—the Standard Shipbuilding Co.

Senator NELSON. Are they all engaged in Government work?

Mr. BOOKWALTER. Yes, sir; all of them.

Senator NELSON. For the Emergency Fleet Corporation?

Mr. BOOKWALTER. Yes, sir.

Senator JONES. How many men are employed in those shipyards?

Mr. BOOKWALTER. Well, the Staten Island Shipbuilding Co. now has about 1,900 men.

Senator JONES. I just wanted the aggregate; you need not give the figures as to each yard.

Mr. BOOKWALTER. You mean those yards that I mentioned?

Senator JONES. Yes; those yards that you mentioned.

Mr. BOOKWALTER. About 5,500 men.

Senator NELSON. In all those yards you mentioned?

Mr. BOOKWALTER. Yes; those I mentioned. There are a number of other yards in my district.

Senator CALDER. How many men were employed in those yards previous to the war?

Mr. BOOKWALTER. About the same number, except the Johnson Shipyard. Of course that is a wooden yard, and it employed very few men.

Senator CALDER. Who is the owner of the Staten Island Shipyard?

Mr. BOOKWALTER. The Staten Island Shipbuilding Co; I do not know who owns it. Mr. Bailey is the president of the company, and Mr. Davidson is general manager, I believe.

Senator CALDER. What Bailey is that?

Mr. BOOKWALTER. I do not know; all I know is that he is Mr. Bailey; rather a young man.

Senator CALDER. Is he a new man in control?

Mr. BOOKWALTER. No, sir.

The CHAIRMAN. How far away do the employees live from the yard?

Mr. BOOKWALTER. Well, at Shooters Island—they send a ferryboat to Elizabethport and also to Staten Island, and they have a boat that runs over to Brooklyn. At their own expense they maintain these ferryboats; they maintain a boat at their own expense to go over there.

Senator NELSON. The workmen do?

Mr. BOOKWALTER. No; the company does.

Senator NELSON. The Government does?

The CHAIRMAN. No; he said the company.

Mr. BOOKWALTER. Yes; it is the company.

Senator JONES. Well, the Government pays that now, does it not?

Mr. BOOKWALTER. No, sir.

Senator JONES. It is no part of the construction of the ships?

Mr. BOOKWALTER. No, sir.

Senator NELSON. Do none of the workmen live on Staten Island?

Mr. BOOKWALTER. Yes, sir.

Senator NELSON. What proportion of them?

Mr. BOOKWALTER. Well, on Staten Island—I suppose probably three-quarters of the workmen on Staten Island are in that vicinity.

Senator NELSON. Yes.

Mr. BOOKWALTER. Now, the Staten Island Shipbuilding Co. men go to work at 7 o'clock in the morning; the Downey men go to work at 7.30 o'clock; and the Standard men at 8 o'clock.

And those people who come across from New York on the municipal ferry land at St. George; then they have to take the trolley line down to the yards. First, they come to the first plant of the Staten Island Shipbuilding Co.; then they come to the Johnson Shipyard;

then they come to the second plant of the Staten Island yard; then they go off and cross on the ferryboat over to the Standard yard; that is on Shooters Island. Then they go on farther down to the Downey shipbuilding plant.

Now, these cars are not sufficient in quantity; the men can not make the trip; it takes too long; they have sufficient cars, I understand, but they will not put them on the line.

Senator NELSON. Those people that have to use those cars and come on the boat there live in Brooklyn, do they?

Mr. BOOKWALTER. No, sir; they live in New York. And the Standard Ship Building Co. bring their men on their own boat from Brooklyn and land at their own place.

The CHAIRMAN. Well, is that satisfactory? Does that work all right?

Mr. BOOKWALTER. Do you mean for the Standard?

The CHAIRMAN. Yes.

Mr. BOOKWALTER. Yes; it seems to work fairly well, but with the work in progress now they need at least three thousand more men.

Senator NELSON. Well, they can put on another boat then, can they not?

Mr. BOOKWALTER. Well, they have tried to get the boat, but the owners want such an outrageous price that they can not get it; they want $13,000 a month. And I have investigated—my report ought to be in to-morrow or the next day—and tried to get a price on these other boats, and they want $500 a day for the boats.

Senator NELSON. Who are the owners of those boats; who are the companies that own them?

Mr. BROOKWALTER. I do not know.

Senator NELSON. Well, you ought to know; you ought to tell us who those people are that are trying to hold up the Government. We want to hold them up to public scorn.

Mr. BOOKWALTER. They want $500 a day for the boat, and the Government to furnish the coal and the water and the standard repairs.

Senator NELSON. Will you get that information and put it into the record of your testimony?

Mr. BOOKWALTER. Yes, sir.

Senator NELSON. Give us the names of those firms.

Mr. BOOKWALTER. Yes, sir.

Senator JONES. Are those boats being used for any purpose now?

Mr. BOOKWALTER. No, sir.

Senator JONES. They are just laying idle?

Mr. BOOKWALTER. Yes, sir; they are excursion boats that run around New York Harbor.

Senator JONES. I want you to be sure to get the names of the owners of those boats and report them to this committee.

Mr. BOOKWALTER. Yes, sir; I will do so. I will send them to the committee.

(The names of the owners of the boats referred to were subsequently furnished by Mr. Bookwalter as being the "Iron Steamboat Company" and the "Central Hudson Steamboat Company.")

Senator CALDER. Have you any complaint against the city of New York as to failing to have enough ferryboats running from the Battery to St. George?

Mr. BOOKWALTER. Well, of course, the city of New York ferry service, you know, is very poor.

Senator CALDER. Well, what is the matter with the service?

Mr. BOOKWALTER. Well, they are late and——

Senator CALDER (interposing). There are not enough boats?

Mr. BOOKWALTER. Well, I do not think there are; they are on a 20-minute schedule.

Mr. CALDER. That is not so bad. Was the schedule ever shorter, do you know?

Mr. BOOKWALTER. No, sir.

Senator CALDER. Well, has there been any complaint from the shipbuilding plants regarding that?

Mr. BOOKWALTER. No, sir.

Senator CALDER. If there is we will take it up with the city of New York.

Mr. BOOKWALTER. No, sir; there is no complaint about that part of it; but there must be some way provided whereby the trip will be shortened to the lower end of Staten Island. There has got to be some way provided to get that labor there; they have to take a street car, or a subway, or an elevated train down to the municipal ferry, and then go across on the ferry over to Staten Island, and then go on the street car and ride about five miles and a half. I made the trip yesterday, and it took me over an hour and a half.

Senator CALDER. One way?

Mr. BOOKWALTER. Yes, sir.

Senator CALDER. From the Battery?

Mr. BOOKWALTER. From my office, 115 Broadway, down to Downeys's yard, takes over an hour and a half, and then you will be making quick connections at that.

Senator HARDING. How can that be shortened?

Mr. BOOKWALTER. If you put the proper boats on, they can be delivered at the yard, I believe, in about 40 minutes.

Senator CALDER. What is the time from the Battery to St. George, the actual operating time?

Mr. BOOKWALTER. About half an hour.

The CHAIRMAN. Could not houses be provided for those workmen near the plant?

Senator BANKHEAD. Yes; build them houses near the plant.

Mr BOOKWALTER. I do not believe that is practical, for this reason: It would take the very workmen that you need in the yards to build those houses. You would have to put in sewerage, and you thing can not be put into effect very quickly, and I believe that you will get that labor supply and they can live where they are accustomed to live, and where their children go to school, and I believe you can deliver them much more quickly and economically by the other method.

Mr. BOOKWALTER. My recommendation is to put a boat on the North River, to leave around the neighborhood of Twenty-third Street, and put another one leaving Brooklyn, and possibly the East River side of New York, about where the Manhattan Bridge is—along about Thirty-ninth Street.

Senator NELSON. Is it not possible to buy such boats?

Mr. BOOKWALTER. Well, I would not want to say about that.

Senator NELSON. Has the Shipping Board or the Fleet Corporation made any effort to secure such transportation?

Mr. BOOKWALTER. Not that I know of, sir.

Senator NELSON. Either to buy it or lease it?

Senator HARDING. Let me ask you in that connection, inasmuch as the Central Railroad of New Jersey, and other railroads, have taken off numerous passenger trains, would it not be possible to get some ferries there to transport those employees—some of the ferries that the railroads have used?

Mr. BOOKWALTER. I do not know. I have gone around and looked at everything I can think of; I have the price on a ferryboat, and if I am not mistaken they wanted $350 a day.

Senator HARDING. Well, there is nothing to prevent commandeering a ferryboat, is there?

Mr. BOOKWALTER. Well, I do not know. I do not understand that we have authority to commandeer those boats; it is the same with the street cars. They will not put those cars on the line. We had a representative of the Public Service Commission of New York go over there, and he stated that the conditions were worse than he had ever seen; but the owners of the street car line refused to put on any more cars.

Senator NELSON. You ought to have the Minnesota Public Service Commission to teach the New York Public Service Commission what to do; we have a good commission out there in Minnesota.

Mr. BOOKWALTER. Well, the street-car owners will not do that unless they are made to do it.

Senator HARDING. Well, let us clear this subject up now that it has been raised. Is it a fact that there is no authority to commandeer the ferryboats?

Senator JONES. Well, a provision in the law was read in this committee the other day showing that the President can take over any boat.

Senator HARDING. He can take over the railroads; he can take over almost anything.

Senator NELSON. I think the Government has a right to commandeer these boats; it is for Government work, for Government purposes.

Senator CALDER. Is it your proposition, Mr. Bookwalter, that we should have a steamboat run a suitable time in the morning from West Twenty-third Street?

Mr. BOOKWALTER. Yes, sir.

Senator CALDER. Stopping at the different plants?

Mr. BOOKWALTER. Yes, sir.

Senator CALDER. And at about the same time one from the east side of New York?

Mr. BOOKWALTER. Yes, sir.

Senator CALDER. And one from some part of Brooklyn?

Mr. BOOKWALTER. Yes, sir.

Senator CALDER. And that at night they should make the trips back again?

Mr. BOOKWALTER. Yes, sir; and the further advantage of that, in my opinion, would be that you could arrange then for the men to get their lunches on those boats while they were at the yards; and that

would put into effect immediately a system of taking care of them both ways.

Senator CALDER. Well, it seems to me that somebody ought to come here with a concrete proposition to this committee as to how that could be done, or else make it to the Shipping Board; submitting such recommendations here to this committee that we could work them out.

The CHAIRMAN. Are those boats used for anything else between the time they go down and the time they return?

Mr. BOOKWALTER. No, sir.

Senator CALDER. I will say this to you, Mr. Bookwalter, that I feel confident that the municipal authorities of New York will see to it that enough ferryboats are put on this route.

Mr. BOOKWALTER. Well, Senator Calder, can I illustrate this thing for you by a diagram? I can then show you just where it lies.

Senator CALDER. Yes.

Mr. BOOKWALTER. I asked the City of New York to give us fire protection, which they refused to do—with the fire boats.

Senator CALDER. Was that before the 1st of January? [Laughter.]

Mr. BOOKWALTER. Yes, sir.

Now, these men have to come down here [illustrating on diagram] to the Battery, and then they have to cross over here [indicating] in the ferryboat, and go to St. George. Then, they have got to go on the street cars on Staten Island, and go down along the shore to this Staten Island Shipbuilding Co. yard and the Johnson yard; and there is a little ferryboat that comes down here [indicating] and goes over to Shooters Island, about 100 yards across, and then they have to go all the way over here to Downeys.

What I propose is to have a boat come in around here [indicating] and land at these places and cut out all of this [indicating].

Senator JOHNSON. The whole trouble is inefficient service in the city of New York. [Laughter.]

Mr. BOOKWALTER. And it is too far. Up here [indicating] is Brooklyn, and they can come straight across in this way [indicating] and cut all of this out. That Bergen Ferry does not run in the wintertime from Staten Island to Brooklyn; it only runs in the summer, and is not running at all now. There is no communication between Brooklyn and Staten Island, and those ferryboats are tied up; every one of them is lying there doing nothing.

Senator CALDER. That is a private ferry?

Mr. BOOKWALTER. Yes, sir; a private ferry.

Senator CALDER. And I presume it does not run in the winter time because there is not much demand for it?

Mr. BOOKWALTER. Yes, sir.

Now, this street car system [indicating] on Staten Island is very inadequate.

Senator CALDER. I think that is correct.

Mr. BOOKWALTER. And another thing is that this Rapid Transit runs down here [indicating].

Senator CALDER. Is that Rapid Transit a poor service?

Mr. BOOKWALTER. It is awful.

Senator JONES. What is the entire distance from a point over in New York down to here [indicating].

Mr. BOOKWALTER. It must be about 5 miles across there [indicating].

Senator CALDER. Yes; on the ferry.

Mr. BOOKWALTER. And it is about 4½ miles down to here [indicating]; about 11 miles I would say down to this point here [indicating].

Senator JONES. You have brought this situation to the attention of the Emergency Fleet Corporation, have you?

Mr. BOOKWALTER. Yes, sir; but the only thing I can see is that we will have to commandeer that and make those street cars run; if we do not commandeer them, they will not have sufficient cars.

Senator JONES. Well, the Shipping Board ought to determine without very much delay whether they have authority to do that or not.

The CHAIRMAN. If you put those boats on that you speak of, you will not need the street cars that you speak of, will you?

Mr. BOOKWALTER. No, sir; that is my idea.

Senator NELSON. Would you not need them for the people who live on Staten Island?

Mr. BOOKWALTER. Yes; they need them; the company must put on more street cars.

Senator NELSON. Well, is that service not sufficient to bring them from New York or Brooklyn, from the places where they live, down to the water side?

Mr. BOOKWALTER. To the water side in the city of Brooklyn or New York?

Senator NELSON. Yes.

Mr. BOOKWALTER. It is.

Senator NELSON. What you need is the service on the ferryboats and then the street railroad up to the yards?

Mr. BOOKWALTER. Yes. sir. But this congestion holds with the present number of employees, and we must get at least 10,000 more men in those shipyards besides the number that we have now; we have got to have them.

Senator NELSON. Can you get them if you have proper transportation facilities?

Mr. BOOKWALTER. I believe we can; that is my opinion.

Senator CALDER. That is my opinion, too.

Mr. BOOKWALTER. You know the construction people have stopped work, and there are many ironworkers in New York and Brooklyn who, I believe, would work there if they had the means of getting to and from work.

Senator CALDER. Is that Staten Island Rapid Transit line a single or a double track?

Mr. BOOKWALTER. A double track.

Senator CALDER. If you will give me your address, I will send you the names of some friends in the public service commission. I think if you will also see Commissioner Murray Hulbert, who was until recently a member of the House and is now commissioner of the dock department, and tell him that from your statement we believe he ought to give you some assistance he will do so. He knows the workings of those things in New York City.

Mr. BOOKWALTER. They have applied for an increased fare, claiming they are running at a loss.

Senator CALDER. That is, that trolley line?

Mr. BOOKWALTER. Yes, sir; they want a 10-cent fare.

The CHAIRMAN. If they carried 8,000 or 10,000 more people, they would not need an extra fare.

Senator NELSON. I move, Mr. Chairman, that we request the Shipping Board and the Emergency Fleet Corporation to take steps to secure, by requisitioning or commandeering, or in any other way, water transportation and trolley transportation to those yards on Staten Island that Mr. Bookwalter has described.

The CHAIRMAN. Why not make it "the yards where needed"?

Senator NELSON. Yes; the yards where needed, and that we send that request to the Shipping Board immediately.

(The motion was unanimously adopted.)

The CHAIRMAN. I have received a communication from Mr. Hurley, chairman of the Shipping Board, dated December 31, 1917, inclosing data with reference to the percentage of completion of the shipyard plants having contracts with the Emergency Fleet Corporation, which was requested by the committee, and that letter, with its accompanying statement, will go in the record at this point.

(The letter and statement referred to are here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
Washington, December 31, 1917.

HON. DUNCAN U. FLETCHER,
United States Senate, Washington, D. C.

MY DEAR SENATOR: Inclosed data refers to the percentage of completion of the shipyard plants having contracts with the Emergency Fleet Corporation which was requested by your committee.

The percentage of completion is based on the estimated total cost of the plant and actual cost to date as being the best guide in judging the degree of completion. In certain cases the information desired has not been obtainable within the time allowed. Where the amounts were not given the percentage of completion was based, where possible, on the most recent progress reports on file in the home office in Washington. The contracts are arranged by districts. Where no percentage of completion is shown, the contracts are all so recent that no progress report is indicated.

Very truly, yours,

EDWARD N. HURLEY,
Chairman.

DECEMBER 20, 1917.

State of completion of shipyard plants based on estimated total cost and actual expenditures to date.

DISTRICT NO. 1.—HENRY O. TROWBRIDGE, DISTRICT OFFICER, BOSTON, MASS.

Contract No.	Contractor.	Actual expenditure on plant to date.	Total estimated cost of plant.	Percentage of completion.
19	Portland Ship Ceiling Co., 4 wood hulls, 3,500 tons each—14,000 tons	$107,000	$130,000	82.3
50	George A. Gilchrest, 1 wood hull, 3,500 tons—3,500 tons	(1)	(1)	.....
59	Cumberland Shipbuilding Co., 9 wood hulls, 3,500 tons each—31,500 tons	250,000	300,000	83.3
60	L. H. Shattuck (Inc.), 18 wood hulls, 3,500 tons each—63,000 tons	355,000	440,000	81
66	Freeport Shipbuilding Co., 1 wood hull, 3,500 tons—3,500 tons	27,600	27,900	99
68	The Kelley Spear Co., 1 wood hull, 3,500 tons—3,500 tons	(1)	(1)	.....
80	Sandy Point Shipbuilding Corporation, 2 wood hulls, 3,500 tons each—7,000 tons	85,387	85,387	100
146	The Atlantic Corporation, 10 steel construction, 8,800 tons each—88,000 tons	.....	(2)	.....

[1] No estimate. [2] Not known.

Totals—plants, 8; vessels, wood hulls, 36, steel steamers, 10—46; tonnage, 214,000.

NOTE.—The total percentage of completion does not include plant for the steel hulls recently awarded under contract No. 146.

***State of completion of shipyard plants based on estimated total cost and actual expenditures to date*—Continued.**

DISTRICT NO. 2.—C. W. BOOKWALTER, DISTRICT OFFICER, NEW YORK CITY.

Contract No.	Contractor.	Actual expenditure on plant to date.	Total estimated cost of plant.	Percentage of completion.
14	The Foundation Co., 10 wooden hulls, 3,500 tons each—35,000 tons.	$567,677	$707,677	80
15	Groton Iron Works, 12 wooden hulls, 3,500 tons each—42,000 tons..	.....	.....	.....
16	Ship Construction & Trading Co., 2 wooden hulls, 3,500 tons each—7,000 tons	.....	.....	.....
23	Traylor Engineering & Manufacturing Co., 10 wooden hulls, 3,500 tons each—35,000 tons	678,819	849,819	79
30	Downey Shipbuilding Co., 10 steel construction, 7,500 tons each—75,000 tons	.....	.....	.....
35	Gildersleeve Ship Construction Co., 2 wooden hulls, 3,500 tons each—7,000 tons	.....	.....	.....
37	Kingston Shipbuilding Co., 4 wooden hulls, 3,500 tons each—14,000 tons	.....	.....	.....
38	Johnson Shipyard Corporation, 3 wooden hulls, 3,500 tons each—10,500 tons	.....	.....	.....
57	Groton Iron Works, 6 steel construction, 8,800 tons each—52,800 tons	.....	.....	.....
73	Housatonic Shipbuilding Co., 10 wooden hulls, 3,500 tons each—35,000 tons	192,242	200,000	96
91	Newburgh Shipyards (Inc.), 4 steel construction, 9,000 tons each—36,000 tons	.....	.....	.....
95	Federal Shipbuilding Co., 10 steel construction, 9,600 tons each—96,000 tons	.....	.....	.....
99	Bayles Shipyard (Inc.), 4 steel construction, 5,000 tons each—20,000 tons	(1)	(1)	.....

[1] Estimate.

Totals—Plants, 13; vessels, wooden hulls, 53, steel vessels, 34—87; tons, 465,300.
NOTE.—Balance of information not obtainable by district officer.

DISTRICT NO. 3.—G. R. McDERMOTT, DISTRICT OFFICER, BALTIMORE, MD.

12	Maryland Shipbuilding Co., 6 wood hulls, 3,500 tons each—21,000 tons	$100,615	$280,000	36
22	Newcomb Life Boat Co., 4 wood construction, 3,500 tons each—14,000 tons	.....	100,000	.....
26	Baltimore Dry Dock & Ship Building Co., 8 steel construction, 8,800 tons each—70,400 tons	.....	.....	.....
41	Henry Smith & Sons Co., 8 wood hulls, 3,500 tons each—28,000 tons.	.....	120,000	.....
43	Potomac Shipbuilding Co., 7 wood hulls, 3,500 tons each—25,500 tons	186,478	300,000	62
62	York River Shipbuilding Corporation, 8 wood hulls, 3,500 tons each—28,000 tons	.....	150,000	.....
94	Hampton Roads Shipbuilding Corporation, 4 steel construction, 7,300 tons each—29,200 tons	.....	(1)	.....
145	Groton Iron Works, 12 steel construction 9,400 tons each—112,800 tons	.....	(1)	.....

[1] Not known.

Totals—Plants, 8; vessels, wood hulls, 33; steel, 24—57; tons, 328,900.
NOTE.—Balance of information not obtainable by district officer.

DISTRICT NO. 4.—W. C. McGOWAN, DISTRICT OFFICER, JACKSONVILLE, FLA.

9	Terry Shipbuilding Co., 20 composite construction, 3,500 tons each—70,000 tons	$516,000	$600,000	86
17	Hillyer Sperring Dunn, 4 wood hulls, 3,500 tons each—14,000 tons..	174,000	180,000	97
24	American Shipbuilding Co., 4 wood hulls, 3,500 tons each—14,000 tons	196,000	200,000	98
27	Tampa Dock Co., 4 wood hulls, 3,500 tons each—14,000 tons	111,000	120,000	95
53	J. M. Murdock, 2 wood hulls, 3,500 tons each—7,000 tons	72,000	90,000	80
55	United States Maritime Corporation, 6 wood hulls, 3,500 tons each—21,000 tons	126,000	198,000	61
56	North Carolina Shipbuilding Co., 2 wood hulls, 3,500 tons each—7,000 tons	31,000	60,000	52
58	Morey & Thomas, 4 wood hulls, 3,500 tons each—14,000 tons,	77,000	95,000	81,94
97	Tampa Shipbuilding & Engine Co	(188,000)	(200,000)	
	Oscar Daniels Co., 10 steel construction, 9,500 tons each—95,000 tons	188,000	300,000	63
141	Southern Shipbuilding Corporation, 16 steel construction, 7,500 tons each—120,000 tons	.....	500,000	.....
1, 2	Merrill Stevens, 4 composite construction, 3,500 tons each—14,000 tons; 4 steel construction, 6,000 tons each—24,000 tons	702,000	1,000,000	70

Totals—Plants, 11; vessels, wood hulls, 26, composite steamers 24, steel steamers 30—80; tonnage 414,000.

State of completion of shipyard plants based on estimated total cost and actual expenditures to date—Continued.

DISTRICT NO. 5.—WARREN JOHNSON, DISTRICT OFFICER, NEW ORLEANS, LA.

Contract No.	Contractor.	Actual expenditure on plant to date.	Total estimated cost of plant.	Percentage of completion.
1	Merrill-Stevens Co. (Slidell yard), 8 composite construction, 3,500 tons each—28,000 tons	$280,000	$500,000	56
29	Jahncke Shipbuilding Co., 6 wood hulls, 3,500 tons each—21,000 tons	295,000	320,000	92
39	Dierks-Blodgett, 6 wood hulls, 3,500 tons each—21,000 tons	200,000	230,000	87
47	Alabama Dry Dock & Shipbuilding Co., 2 wood hulls, 3,500 tons each—7,000 tons	56,000	72,000	78
44	Kelly-Atkinson Co., 18 composite construction, 3,500 tons each—63,000 tons	356,000	490,000	73
49	Murman Shipbuilding Co., 4 wood hulls, 3,500 tons each—14,000 tons	91,000	100,000	91
51	Hodge Ship Co., 4 wood hulls, 3,500 tons each—14,000 tons	138,000	160,000	86
88	Dantzler Shipbuilding Co., 6 wood hulls, 3,500 tons each—21,000 tons	160,000	180,000	89
98	Jahncke Shipbuilding Co., 6 of steel construction, 5,000 tons each—30,000 tons	.....	(1)	.....
144	Pensacola Shipbuilding Co., 10 of steel construction, 9,000 tons each—90,000 tons	.....	(1)	.....

[1] No estimate of cost.

Total plants 10; number vessels, wood hulls 28, composite steamers 26, steel steamers 16—70; tonnage 209,000.

DISTRICT NO. 6.—CHAS. N. CROWELL, DISTRICT OFFICER, HOUSTON, TEX.

20	Universal Shipbuilding Co., 12 wood hulls, 3,500 tons each—42,000 tons	$160,000	$275,000	58
21	McBride & Law, 4 wood hulls, 3,500 tons each—14,000 tons	.....	.....	.....
28	Union Bridge & Construction Co., 6 wood hulls, 3,500 tons each—21,000 tons	202,000	226,000	89
32	National Shipbuilding Co., 12 wood hulls, 4,700 tons each—56,400 tons	280,000	370,000	76
36	Lone Star Shipbuilding Co., 8 wood hulls, 3,500 tons each—28,000 tons	185,000	205,000	90
45	J. N. McCammon, 2 wood hulls, 3,500 tons each—7,000 tons	32,000	50,000	64
52	Southern Dry Dock & Shipbuilding Co., 5 wood hulls, 3,500 tons each—17,500 tons	142,000	175,000	81
54	Midland Bridge Co., 6 wood hulls, 3,500 tons each—21,000 tons	207,000	240,000	86
71	Beaumont Shipbuilding & Dry Dock Co., 4 wood hulls, 3,500 tons each—14,000 tons	269,000	270,000	99
89	Heldenfels Bros., 4 wood hulls, 3,500 tons each—14,000 tons	65,000	109,000	60

Total—Plants, 10; vessels, wood hulls 63; tonnage 234,900.

DISTRICT NO. 7.—A. F. PILLSBURY, DISTRICT OFFICER, SAN FRANCISCO, CAL.

4, 92	Los Angeles Shipbuilding and Dry Dock Co, 18 steel construction, 8,800 tons each—158,400 tons	$1,400,000	$1,750,000	80
18	Moore & Scott Iron Works, 10 steel construction, 9,400 tons each—94,000 tons	.....	2,250,000	.....
46, 90	Hammond Lumber Co., 4 wood hulls, 3,500 tons each—14,000 tons	103,800	105,000	98
48	Western Pipe & Steel Co., 8 steel construction, 8,800 tons each—70,400 tons	725,000	800,000	91
63	California Shipbuilding Co., 3 steel construction, 6,000 tons each—18,000 tons	877,000	877,000	100
64	Kruse & Banks Shipbuilding Co., 6 wood hulls, 3,500 tons each—21,000 tons	200,000	200,000	100
65	Fulton Shipbuilding Co., 4 wood hulls, 3,500 tons each—14,000 tons	90,000	100,000	90
72	Coos Bay Shipbuilding Co., 4 wood hulls, 3,500 tons each—14,000 tons	179,000	200,000	90
79	Ralph J. Chandler, 2 wood hulls, 3,500 tons each—7,000 tons	60,000	90,000	67
81	Benicia Shipbuilding Corporation, 2 wood hulls, 3,500 tons each—7,000 tons	130,000	160,000	81
142	Pacific Coast Shipbuilding Co., 10 steel construction, 9,400 tons each—94,000 tons	82,000	900,000	9

Total—Plants, 11; vessels, wood hulls, 22; steel steamers, 49—71; tonnage, 511,800.

State of completion of shipyard plants based on estimated total cost and actual expenditures to date—Continued.

DISTRICT NO. 8.—JOHN F. BLAIN, DISTRICT OFFICER, SEATTLE, WASH.

Contract No.	Contractor.	Actual expenditure on plant to date.	Total estimated cost of plant.	Percentage of completion.
74	Nilson & Keles Shipbuilding Co., 4 wooden hulls, 3,500 tons each—14,000 tons	$67,000	$75,000	89.3
75	George F. Rodgers Shipyard Co., 4 wooden hulls, 3,500 tons each—14,000 tons	50,000	75,000	66.7
76	Seaborn Shipyard Co., 8 wooden hulls, 3,500 tons each—28,000 tons.	98,000	105,000	93.3
77	St. Helens Shipbuilding Co., 2 wooden hulls, 3,500 tons each—7,000 tons	95,000	95,000	100
78	Babare Bros., 1 wooden hull, 3,500 tons—3,500 tons	175,000	176,000	99.4
82	Wright Shipyards, 2 wooden hulls, 3,500 tons each—7,000 tons	70,000	90,000	77.7
84	Feeny & Bremer Co., 1 wooden hull, 3,500 tons—3,500 tons	20,000	25,000	80
85	Tacoma Shipbuilding Co., 4 wooden hulls, 3,500 tons each—14,000 tons	227,000	250,000	90.8
98	Erickson Engineering Co., 10 steel construction, 9,400 tons each—94,000 tons	60,000	550,000	10.9
100	Patterson McDonald Shipbuilding Co., 8 steel construction, 8,800 tons each—70,400 tons	17,000	400,000	4.2

NOTE.—Balance of information not sent in by district officer.

DISTRICT NO. 8.—JOHN F. BLAIN, DISTRICT OFFICER, SEATTLE, WASH.

3	G. M. Standifer Construction Corporation, Portland and Vancouver (combined), 10 wood construction, 3,500 tons each—35,000 tons	$585,000	$600,000	97.5
5	Peninsula Shipbuilding Co., 4 wood construction, 4,000 tons each—16,000 tons	178,000	225,000	79.1
6	Sloan Shipyards Corporation, Olympia, 16 wood construction, 3,500 tons each—56,000 tons; Anacortes	307,000 304,000	310,000 310,000	99 98
7	Grays Harbor Motor Ship Corporation, 4 wood hulls, 4,000 tons each—16,000 tons	150,000	175,000	85.7
8	Coast Shipbuilding Co., 4 wood hulls, 3,500 tons each—14,000 tons.	214,000	220,000	97.2
10	Skinner & Eddy Corporation, 6 steel construction, 8,000 tons each—48,000 tons	1,010,000	1,211,000	83.4
11	Sanderson & Porter, 10 wood hulls, 3,500 tons each—35,000 tons	330,000	385,000	88
13	Seattle Construction & Dry Dock Co., 10 steel construction, 7,500 tons each—75,000 tons	4,568,000	4,600,000	99.3
31	Supple & Ballin, 8 composite construction, 4,000 tons each—32,000 tons	304,000	310,000	98
34	Grant-Smith-Porter-Guthrie Co., 12 wood construction, 3,500 tons each—42,000 tons; St. Johns	466,000	500,000	93.2
40	Grant-Smith-Porter-Guthrie Co., 8 wood construction, 3,500 tons each—28,000 tons; Aberdeen	50,000	62,000	80.6
67	Sommarstrom Ship Building Co., 4 wood hulls, 3,500 tons each—14,000 tons	204,000	210,000	97.1
69, 143	Meacham & Babcock Ship Building Co., 2 wood hulls, 3,500 tons each—7,000 tons; 4 wood construction, 3,500 tons each—14,000 tons.	145,000	200,000	72.5
70	Wilson Shipbuilding Co., 3 wood hulls, 3,500 tons each—10,500 tons.	179,000	190,000	94.2

Total—Vessels, wood 107, steel 34, composite 8—149; tonnage 607,900.

DISTRICT NO. 9.—H. PENTON, DISTRICT OFFICER, CLEVELAND, OHIO.

25	Lake & Ocean Navigation Co	.....	.....	.....
61	Saginaw Ship Building Co	$315,000	$350,000	90
101 140	American Ship Building Co. (6 yards)	1,000,000	2,000,000	50

Total—Vessels, wood 1, steel 46—47; tonnage, 166,500.

DISTRICT NO. 10.—F. W. GROGAN, DISTRICT OFFICER, PHILADELPHIA, PA.

33	Sun Shipbuilding Co., 4 steel construction, 10,000 tons each—40,000 tons	(1)	(1)	100

[1] No estimates.

Total—1 plant, vessels, steel steamers 4; tons, 40,000.

The CHAIRMAN (continuing). Mr. Sanford wishes to make a correction of his statement for the record.

Mr. SANFORD. In answer to a question from Senator Johnson regarding the value of timber such as we are furnishing the Shipping Board during the previous years, I have talked with two sales managers of large companies, who are more familiar with the subject than I am, and their idea is that the value during those three years was from $30 to $35 a thousand.

(Thereupon. at 5.05 o'clock p. m., the committee adjourned to meet at 10.30 a. m., Tuesday, January 8, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

TUESDAY, JANUARY 8, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met pursuant to adjournment at 10.30 o'clock a. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, Martin, Bankhead, Nelson, Jones, Sherman, Harding, Fernald, Calder, and Johnson.

The CHAIRMAN. The committee will come to order and we will proceed with the hearing. We will first hear Mr. Ferguson.

STATEMENT OF MR. HOMER L. FERGUSON, PRESIDENT NEWPORT NEWS SHIPBUILDING & DRY DOCK CO., NEWPORT NEWS, VA.

The CHAIRMAN. Please state your name, Mr. Ferguson, and your place of residence.

Mr. FERGUSON. H. L. Ferguson, Newport News, Va.

The CHAIRMAN. What business are you engaged in?

Mr. FERGUSON. Shipbuilding.

The CHAIRMAN. How long have you been engaged in that?

Mr. FERGUSON. I have been at Newport News 12 years. Before that I was in the Navy for 17 years; as a naval constructor the last 11 years of that time.

The CHAIRMAN. To what extent are you engaged in the business at Newport News?

Mr. FERGUSON. We have about $120,000,000 in ship contracts at the present time. We employ about 8,000 men in building destroyers, battleships, battle cruisers, and merchant ships. The battle cruisers have been temporarily held up to give destroyers precedence and also merchant ships.

The CHAIRMAN. You are engaged in completing some of the commandeered ships and some new contracts?

Mr. FERGUSON. Yes, sir. We have six remaining commandeered ships to complete. One of them is being delivered to-day and one will be delivered in about a week. The keels of two others have been laid and they are well underway, and two others are just beginning. We have delivered of commandeered ships, I think, four since the act of commandeering on August 4 last.

The CHAIRMAN. What is the size of these ships that you speak of?

Mr. FERGUSON. They run from 7,500 tons dead-weight to 15,000 tons dead-weight. The ship that we deliver next week is an oil ship,

a 15,000 dead-weight tanker, similar in design to four other ships we built for the Standard Oil Co., two of which were delivered this last year.

The CHAIRMAN. You are president of the Newport News Shipbuilding & Dry Dock Co.?

Mr. FERGUSON. Yes, sir; I am president and general manager of the Newport News Shipbuilding & Dry Dock Co.

The CHAIRMAN. How many ways have you there?

Mr. FERGUSON. We have seven ways at present. We are constructing two large 1,000-foot ways for the Navy Department, for battle cruisers, and four additional smaller ways for destroyers, which would give us a total of 13 ways. The two large ways will handle a thousand-foot ship of over 100-feet beam, but we expect to use those two ways for building ships for the Emergency Fleet Corporation, and can build on them either large vessels, such as troop transports, which have been designed, or we can build two smaller vessels, which is now contemplated, of about 12,000 tons dead-weight each, on each of these two ways. At present we have destroyers on four of our original shipways, two destroyers each on three of them, making six, and one destroyer on a small way. So that we are building seven destroyers at one time. When we get the four additional ways that will give us 11 destroyers under construction at one time. Of our original ways we have a battleship on one, and on the two other original ways we have two 12,000-ton oil tankers. At present we have 7 ways, and we expect to have 13. On each of the 2 large ones, 2 merchant ships can be built at one time.

Senator RANSDELL. How soon will these additional ways be completed?

Mr. FERGUSON. These additional ways will be completed in June. We will be ready to begin work, however, building merchant ships on them before that time, because we can use the inner ends of them—they are so long. The Navy Department has given permission to the Shipping Board to use these ways for merchant ships for the present, deferring the building of the battle cruisers.

It is proper to state that in the expenditures we are making at Newport News, about seven or eight million dollars, we are being assisted very materially by the Navy Department, and they are, we believe, willing to allow the facilities for which they are putting up a part of the money to be used by the Emergency Fleet Corporation if the Fleet Corporation will assist in the housing problem, which is at present very much more serious with us than the problem of facilities for building.

The CHAIRMAN. You say the Emergency Fleet Corporation is to have preference in your work there?

Mr. FERGUSON. No, sir. It is to have, though, the use of these two large ways and the use of the shop facilities which go with the ways. The ways are only a part of it. For instance, out of the $7,000,000 we are expending, these two large shipways will cost about $2,000,000. But of course there are many machines and foundry facilities and forging facilities and all that that go with these ways in order to make it a balanced proposition. Our shipyard builds the machinery as well as the hulls, and so that we expand more or less uniformly in every department to meet an additional new way.

The CHAIRMAN. What I am asking is whether the building of merchant ships is delayed by reason of your contracts with the Navy.

Mr. FERGUSON. Oh, yes, sir; the destroyers have preference.

The CHAIRMAN. How much will you be delayed in the building of the merchant ships?

Mr. FERGUSON. We are not delayed at all on our present contracts. We have been prevented from taking additional contracts; that is, we have not taken any merchant contracts that we could not deliver when we said we would deliver them. As a matter of fact, we have delivered this year all of our ships practically on time or ahead of time. But we would have taken a great many merchant contracts had it not been for the destroyers.

The CHAIRMAN. That I understand; but, as a matter of fact, your contracts for building merchant ships are being performed, notwithstanding the contracts with the Navy Department, as it stands now?

Mr. FERGUSON. Yes, sir; the ships we contracted to deliver are being built, because we stopped taking merchant contracts as soon as we got all these destroyer contracts.

Senator CALDER. Mr. Ferguson, did I understand you to say that you have contracts with the Fleet Corporation for building merchant ships or for completing them?

Mr. FERGUSON. No, sir; we have made no contracts with the Shipping Board for completing any ships; we are simply building ships for private owners, American owners in every instance, which are the ships commandeered by the Emergency Fleet Corporation.

Senator CALDER. Will you tell the committee under just what conditions the Government took over these ships? I assume, of course, that contracts were based on a certain price, fixed with the people with whom you did business. What are the circumstances of the Government's paying for these ships?

Mr. FERGUSON. The ships were simply taken over by the Government; the contracts themselves were not commandeered. We had a considerable amount of correspondence with the Emergency Fleet Corporation as to the desirability of not only commandeering the ships which were in being and of which the keels had been laid—a ship is not a ship until the keel is laid—but as to commandeering contracts as well, so that any altercation that might arise would be between the Emergency Fleet Corporation and the man who had contracted for a ship.

Well, the Emergency Fleet Corporation had arranged, under Gen. Goethals, a complete program as to commandeering ships under construction actually, as to commandeering contracts, as to the basis of payment, as to the basis of overtime, as to the basis of meeting the increased wages that have come about due to this war, and as to the basis for future contracts; and of course when the Shipping Board blew up and started with a new management, that was all more or less upset; and so far as the settlement of these contracts is concerned at the present time we are no further along—in fact, not quite so far along in the settlement of the legal features involved and as to a working policy—than we were when Gen. Goethals went out. In fact, I do not think we are as far along.

Now, of course, that has not prevented the actual work going on on these ships, and the Fleet Corporation has now partially defined

a policy, which has been lacking. We have not been, as a company, particularly interested, because we did not have very many of these contracts; we could afford to take the losses if we had to, and it has not stopped us for a moment from going ahead and building these ships. As to what we are going to get for these ships we are just beginning to find out. The Emergency Fleet Corporation, as I understand it, took over the ships for the purpose of expediting the work. The work has not been expedited as a result of their taking them over; as a matter of fact, we would have finished the ships quicker had they never touched them.

Senator JOHNSON. What has been the trouble since Gen. Goethals resigned? What is the cause of that?

Mr. FERGUSON. Well, the Fleet Corporation has been mainly taken up with the very large problem of starting a large number of new yards. The organization of the Fleet Corporation is new. We started to build up a machine all at once to do a tremendous job of work, and it takes time to do it.

Senator JOHNSON. Yes; but you say you had advanced a certain distance under Gen. Goethals, and now you have receded somewhat.

Mr. FERGUSON. Well, that is in regard to policy. I do not know how much that has held up building, but Gen. Goethals' policy apparently did not altogether satisfy his successors.

Senator JOHNSON. Has there been a new policy?

Mr. FERGUSON. There is now, under Mr. Hurley and Mr. Piez, a thoroughly well-defined policy being formulated and created, under which we know what we are going to get.

Senator JOHNSON. A policy differing essentially from what was originally formulated.

Mr. FERGUSON. No, sir.

Senator JOHNSON. The same policy?

Mr. FERGUSON. Practically.

Senator JOHNSON. That is what I am getting at. There was a distinct and definite policy that was adopted by Gen. Goethals that had been proceeded with to a certain point. Subsequently, when the new management of the Shipping Board came into being, that policy apparently lapsed for a considerable period, you did not make any progress under it, and indeed there was delay, because nothing was done; but the same policy is now being pursued and is apparently being taken up with some push behind it?

Mr. FERGUSON. Practically the same; yes, sir.

Senator CALDER. You say the construction of these commandeered ships was delayed somewhat?

Mr. FERGUSON. I do not say it was delayed, but I do say it was not expedited as much, in my judgment, as it would have been expedited had the owners of the vessels been able each to act independently. You will understand, Senator, when we took contracts two years ago under a fixed price with a fair margin of profit, say 15 per cent or 20 per cent, none of us anticipated what was going to happen in the labor and material market. Now the average owner, realizing that and wanting his ship, is perfectly willing to make up to the shipbuilder some of the increase in wages and some of the extra cost due to overtime, which we are virtually forced to indulge in now to an abnormal extent in order to get the ships out.

Now, all that was really necessary was for the Emergency Fleet Corporation to establish a policy in regard to what they would do, and it was absolutely necessary in the case of some of the smaller yards and yards that had taken a large number of contracts to have financial assistance to get through with those contracts if the United States wanted to keep them in the business. Every man that can build a ship should be building a ship.

The CHAIRMAN. Did not the Government continue the payments under the contracts?

Mr. FERGUSON. Yes, sir; they are paying for the ships under the original contracts, so far as we are concerned, the prices at which we contracted for those ships. We told them we were willing either to take that as a basis of settlement or we were willing that they should take all the ships on the basis of their actual cost plus a fixed sum; but we did feel that, as in the case of these merchant ships we were losing money on practically all of them, or just breaking even, the increased cost due to overtime and the abnormal increase in wages should be met in some way by the Fleet Corporation, and they are now doing that.

Senator CALDER. So that these commandeered ships are costing considerably more than originally provided for in your contract?

Mr. FERGUSON. Not much more. In ships that we have finished—in a $600,000 ship, for instance, our overtime has not amounted to more than $15,000 or $20,000. It is a very small proportion. The ships are costing more, due to some changes. All of these commandeered ships are being equipped to go through the war zone, with guns, crows' nests on the masts, a great mass of voice tubing, quarters for the gun crews, and all that sort of thing. On an ordinary ship that would amount to probably $50,000 or $60,000, but the cost of the overtime and the increase in wages has been a comparatively small proportion of the cost of the vessel.

Senator JOHNSON. When was it they began speeding up the program—just recently?

Mr. FERGUSON. That speeding-up process was supposed to have been inaugurated on August 4, when the ships were commandeered.

Senator JOHNSON. I know it was supposed to have been inaugurated then, but you said they did not follow the program.

Mr. FERGUSON. Well, we would have speeded up just the same, Senator, whether we were going to get paid for it or not, in our case. We just simply trusted to the Fleet Corporation to eventually settle the question of overtime and increase in wages. Whether we get it or not will have no effect on our work.

Senator JOHNSON. When was this new policy that you have described inaugurated?

Mr. FERGUSON. In December.

Senator JOHNSON. And between the 4th day of August and December was the matter left in abeyance entirely?

Mr. FERGUSON. No; it was discussed a great many times back and forth.

Senator JOHNSON. But nothing was done?

Mr. FERGUSON. Nothing.

Senator JOHNSON. And was it because of that interim of some months that you said you proceed so far under the program that

had been inaugurated by Gen. Goethals and then had practically receded until December?

Mr. FERGUSON. Yes, sir. It was under discussion all the time. I think the real cause of it was this, Senator, that in formulating the policy as to how these ships were to be treated the Emergency Fleet Corporation was very anxious that anything they should do would stand the congressional investigation that is going on now—a fear of consequences that would follow upon a settlement on a policy which might be fair to one man and let another man make a lot of money.

For instance, we have contracts at $160 a ton for two ships. We took those contracts to recoup ourselves on other contracts for $60 a ton for the same kind of ship. So that in follwing out a policy it is very difficult to arrange it so that the thing that will be fair to one man will not give another man a lot of money. The idea seemed to be that no one should make too much out of this, notwithstanding he had his contracts, but to settle on one basis, so that if he lost money, for instance, as on the West coast, you would be allowed to make up that loss, but if you made more than 10 per cent you would be treated on a different basis. In other words, it was a trading proposition, and of course it delayed the settlement of the whole question.

Senator JOHNSON. Was anything suggested about a congressional investigation at any time?

Mr. FERGUSON. Oh, yes.

Senator JOHNSON. Who suggested it?

Mr. FERGUSON. I mean it was just ordinary talk that there would inevitably be an investigation of these things and the fear of investigation.

Senator JOHNSON. Talk between whom?

Mr. FERGUSON. It was discussed between everybody, practically.

Senator JOHNSON. Do you mean representatives of the Fleet Corporation?

Mr. FERGUSON. Yes, sir; and the shipbuilders and everybody; that everyone must be extremely careful, you understand, at this time with all this great sum of Government money being expended, that everything should be absolutely aboveboard and clear. Of course we all appreciated that, but in the settlement of a policy it is almost impossible that a thing which will help one man will not help another man a great deal more, because you will understand that the foreign contracts that were taken in this country were taken at very large prices. Other men were building ships on speculation, as it were—that is, building ships for themselves which they expected to sell. If you say you will give me a price of $500 a ton for a ship that is a right serious thing when you are buying the same ship from another man at $100 a ton. It was inevitable that there would be that difference in contract prices and differences in conditions. A great many ships were being built on cost plus percentage; in some cases as high as 25 or 30 per cent above actual cost.

I can not acquainted with all the various conditions, but I do know that there has always been in all of this work the feeling that no one must make an abnormal profit out of the Government's going into the shipping business. I have always felt, so far as the contracts

were concerned that were made prior to the commandeering, that it was very difficult to settle those on any basis that would not help some man very much more than it would help others.

Senator CALDER. So, Mr. Ferguson, you have now arrived at some basis of settlement with the Shipping Board on these commandeered ships?

Mr. FERGUSON. Yes, sir.

Senator CALDER. What is the basis of settlement?

Mr. FERGUSON. The basis of settlement is that after the middle of December the Emergency Fleet Corporation authorized the shipbuilders to pay the wages of the nearest navy yard, and any increase over their rates prior to that time will be paid by the Fleet Corporation—I might say that the navy-yard rates in general, certainly with us, are a little higher than the rates we pay—and that in the case of overtime, over eight hours, the Emergency Fleet Corporation will pay the excess overtime cost and will make a certain allowance for loss of efficiency after so many hours of work. For instance, if we work 10 hours the men get 11 hours' pay, and the Fleet Corporation, as is usual in any contractural work which needs to be expedited, will pay that additional one hour of overtime or will allow a certain proportion of overhead expense on that. If the work is for longer than 10 hours they will also allow a certain proportion for loss of efficiency, which, of course, does exist; when men work long hours their loss of efficiency extends not only over the overtime hours but over the entire day.

Senator CALDER. I think that is fair.

Mr. FERGUSON. It seems to be.

Senator HARDING. Right there, what would be the overhead expense incident to overtime?

Mr. FERGUSON. It is arbitrary, Senator, to a considerable extent. There will be an additional overhead expense for this reason: The overtime when we work long hours does not apply to the entire plant, so that you are running your power plant and your overhead expense at a higher expenditure per unit of actual labor performed than during the ordinary day. The overhead expense of an ordinary shipyard, running properly, is about 50 per cent of the direct labor cost.

Senator HARDING. Accepting the generally approved theory that a man can do a better day's work in 8 hours than in 10, what do you think of the policy of working overtime on shipbuilding?

Mr. FERGUSON. I think that in the piecework trades, particularly like riveting, where men make considerable physical effort, the most work can be done by a man working, say, 48 hours a week, and preferably 9 hours a day for five days and a half a day Saturday. In other trades where men do not exert great physical effort a man can work 10 hours almost as well as 8; that is, jobs like most machinists' work, particularly in shops where the man is running tools and where only the man's attention and presence are required.

Senator HARDING. Then we are not adding to our efficiency by working overtime, are we?

Mr. FERGUSON. Yes; we are in the machinery departments. For instance, in our plant not more than 30 per cent of the work is piecework. A great many pieceworkers can work longer than eight

hours. It depends very much on the man. But in our machinery departments, which are working 10 hours, I am of the opinion that, although there is a decreased efficiency, we will get out of them a greater performance per day than we would on an 8-hour basis. I do not think a man will do as much work per hour if he really works 10 hours or 12 hours, but he will do as much work in 10 hours, say, as he would in 9 hours if he worked at an 8-hour rate. You understand, there is a certain loss of efficiency; it probably is not as much as 2 hours, but it might be as much as 1 hour out of his day's work. That is about what my experience would indicate.

But in working overtime a great deal of time is saved on certain jobs. In building a ship the difficulty is to make it all come out together, at the same time, and if certain machinery is missing or certain auxiliaries are missing, which is the case now in practically every ship, when it is very difficult to get deliveries; or if a sternpost does not come in time, it pays them to work a gang of men on that job all night and all day Sunday to make that job catch up with the other work. There is great benefit from overtime work in emergencies of that kind, and the present situation of material deliveries and railroad transportation is such as to make those times quite frequent.

Senator HARDING. How many ships have you under contract?

Mr. FERGUSON. Forty-one.

Senator HARDING. How near are you going to come to a delivery according to the program?

Mr. FERGUSON. If we can get our materials in time, Senator, we will meet our deliveries. The shipbuilding situation now, particularly as regards destroyers, is largely a matter of steel forgings.

Senator HARDING. How many merchant ships are you building?

Mr. FERGUSON. Only six. We have two contracts ready to be executed with the Emergency Fleet Corporation now to build them two additional ships in order to utilize the ways as they become vacant.

Senator HARDING. Will you deliver your cargo ships on schedule?

Mr. FERGUSON. Yes, sir; we will deliver our remaining ships ahead of schedule.

Senator CALDER. I thought you said a little while ago you had not any merchant ships under contract?

Mr. FERGUSON. These are commandeered ships, and we are just now contracting with them for additional oil tonnage.

Senator CALDER. How many commandeered ships were taken over by the Shipping Board?

Mr. FERGUSON. I think they took 9 of ours, or 10. We have delivered all but 6, and 2 of the ships will be delivered within a week.

Senator CALDER. Do you believe, as a matter of policy, that it would have been better to have permitted those contracts to go on as private contracts and have had the deliveries made?

Mr. FERGUSON. I do not know as to the governmental policy, but as to the matter of expediting and finishing the ships quickly, my judgment is that the ships would have been finished quicker under private ownership. Of course, that depends a great deal on the owner, but the owners we were building for were people of such responsibility and fairness in their business methods that I do not know but what we would have made our deliveries really earlier.

Owners have come to us and said they were willing to pay a bonus for their ships of as much as $1,000 a day.

Senator HARDING. Does the Government pay you any bonus for expedited delivery?

Mr. FERGUSON. No, sir.

Senator HARDING. Does it contract to do so on the merchant ships you are contracting?

Mr. FERGUSON. I do not believe so. We have put in our proposed form of contract a penalty for delayed delivery and given times of delivery, but as a matter of fact, the bonus for an earlier delivery is not a very desirable thing unless it permeates all your contracts. We do not like a bonus for delivery on one contract when another contract is ahead of it. We have contracts in regular order and we will not give a man a preference, no matter how much bonus he offers us, over other ships that we have under contract which are ahead on the schedule. If a bonus permeates your whole establishment it will help you some, but even there it has its limitations, because we all would naturally now increase our forces and capacity just as much as we could. Personally, I do not care whether we get a bonus or not, because if we can deliver the ships and get them on the sea that is enough of a bonus. I feel that the money consideration is a very unimportant matter at this time, so long as the shipyard makes enough money to keep up its plant and pay its expenses and make the improvements that are required. The ordinary commercial consideration of making more money by way of bonuses does not appeal to me at this time, because I think we have a very much more powerful incentive in the fact that we have got to build our ships.

Senator RANSDELL. Have you any ships under contract for the Fleet Corporation besides those that were commandeered?

Mr. FERGUSON. No, sir. We are just contracting for two new ships with them now.

The CHAIRMAN. Those are fabricated ships, are they?

Mr. FERGUSON. No, sir; they are oil ships. The fabricated ships are practically all designed to burn oil fuel, and it is necessary to have oil tankers to bring the oil from Mexico for those ships. We feel ourselves that the best duty we can perform in building ships for the Government at the present time, or for the Emergency Fleet Corporation, is to build fuel tonnage, which is very much more difficult to build and which requires experienced people. We would rather build fabricated ships, of course.

Senator RANSDELL. How long will it take you to build these ships you are contracting for at the present time?

Mr. FERGUSON. It takes about—oh, I should say our deliveries would be about 15 months from now, on account of the other work going ahead of it.

Senator RANSDELL. The naval work, you mean?

Mr. FERGUSON. Yes, sir; the naval work and the other merchant work we have in hand. The time required to build a single individual ship is comparatively unimportant; the output is the important thing. We can build one ship in a very short time, but we do not build one ship; we build a year's tonnage, and our output over a year is what we want. We might build one ship in six months and

do nothing else. In building a merchant ship, from the time we lay the keel until launching is four and a half months, say, and from four to six weeks after launching. But that is comparatively unimportant; we want to get the maximum output of 8,000 men distributed over a year. So the monthly or yearly rate of delivery is far more important than the speed made on an individual ship.

We have two oil ships exactly like these two we are building for the Government; in fact, they are duplicates of five oil ships that we have built for the Standard Oil Co.; and if the problem was simply building those ships we could build them and deliver them in eight or nine months. But, of course, they would cut in on the rest of our product.

Senator JONES. Mr. Ferguson, I understand that the battle cruisers you were to build were put aside.

Mr. FERGUSON. Yes, sir.

Senator JONES. In the interest of taking up the destroyers?

Mr. FERGUSON. Yes, sir.

Senator JONES. I think that was wise, myself, and without suggesting that it would be wise to put aside these destroyers and take up merchant ships, I just want to ask you, for information, as to how many merchant ships you could have put on your ways in the place of destroyers; in other words, I want to get at what your plant could do in the way of merchant ships if used to as full capacity as possible.

Mr. FERGUSON. If it were practical to use our entire plant for merchant ships we could probably, with our present force, build about 200,000 dead-weight tons of merchant ships a year, probably more. With our increased plant we could build 300,000 to 350,000 tons dead-weight of merchant ships a year. Last year we launched and completed 10 merchant ships of about 96,000 tons dead-weight capacity, including three tankers, and launched and completed and delivered a battleship of 32,000 tons; and, in addition, repaired—including in many cases arming ships going abroad—between 650 and 700 ships. If that entire capacity were put on merchant ships it would probably have given last year some 200,000 tons of ships.

Senator JONES. And this year?

Mr. FERGUSON. And this year, after we get our new facilities in commission, it will almost double our output, which would run it up to about 350,000 tons per annum.

Senator JONES. And this tonnage would be coming into the service all through the year.

Mr. FERGUSON. Yes, sir.

Senator JONES. Every month?

Mr. FERGUSON. Yes, sir.

Senator JONES. When were these destroyers taken on?

Mr. FERGUSON. We started in May, I think, with the first one.

Senator JONES. And that is last year?

Mr. FERGUSON. Yes, sir.

Senator JONES. Now, then, if in the place of those destroyers you would have taken on merchant ships, what tonnage would you have been getting off early this year?

Mr. FERGUSON. If we had confined ourselves to merchant ships and had dropped the battleships, as well as the battle cruisers, we would be producing ships at the rate of probably two a month.

Senator JONES. Of what tonnage?

Mr. FERGUSON. Oh, of 9,000 or 10,000 tons. At first it was decided that we would not build destroyers. We would prefer not to build destroyers, because our plant is laid out for doing large work. Our facilities are all large. We build a destroyer on ways 650 feet long, and it takes but 300 feet of length. Our shops are large and our crane facilities are large. But the pressure for destroyers became so great and it became the Government's policy, which I think is a correct one, to build the maximum number of destroyers that could be produced, in order to conserve the tonnage that is now afloat, and that is being built. Of course, we are building our Government ships under the order of the President, in accordance with the congressional acts. They changed us from taking up a merchant's shipbuilding program and put us on destroyers, because the destroyers can not be built—at least, we think they can not be built—except by people who have been in the business for a considerable time.

The CHAIRMAN. Where you work overtime, is that by agreement with the men, or do they protest or object to that?

Mr. FERGUSON. Oh, no; the men do not object. In fact, the men have to have overtime now, Senator, from commercial necessity, as well as from war necessity. With us, even at the navy-yard rates, the highest rates in our vicinity, a man working only eight hours a day, with the cost of everything where it is now, would have pretty hard going to get along. It has become a commercial necessity with the men, just as, in my judgment, a war necessity; and, furthermore, I will say this about the men: The men with us are willing to work overtime, and the best men are willing to subject themselves to almost any inconvenience and to work in weathers when ordinarily they would not. Of course, the floating labor, which is the bane of industry at the present time, is not that way. But our regular men, which comprises about two-thirds of our force, are willing to do anything that any of us would be willing to do.

The CHAIRMAN. Have you any trouble about getting material now?

Mr. FERGUSON. We have a great deal, Senator, at our place, because Newport News is embargoed against the United States about three-fourths of the time, and is now under embargo except for carload shipments, with the exception of the shipyard and the war activities down there. We have to keep men continually on the road, because the embargo clerks of the various railroads have got an embargo on Newport News which would stop all our shops, and we keep about six men chasing shipments. We have had very good success in getting whatever we need, and we have lost practically no time on account of transportation by the railroads, because whether we had priority orders or not—and the priority orders have not helped us at all—we can get stuff about as quickly without priority orders as we can with them. It is appreciated so much by the transportation people that shipbuilding is important that they send on our material.

Senator JOHNSON. I would like to return, just a moment, to the subject you were discussing briefly a moment ago.

Mr. FERGUSON. Yes.

Senator JOHNSON. The men, as I understand it, have shown a disposition to do everything possible to aid you in the work?

Mr. FERGUSON. The majority of the men; yes, sir.

Senator JOHNSON. That is, those who are regular employees, and those who were regularly of the sort employed by you?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. In overtime, in speeding up, and in every attitude they have displayed their desire to be of service, have they not?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. You said, as well, too, that overtime became a necessity at present because of the increased cost of living; and that the men desired it because of that very necessity?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. You have answered completely the strictures that have been indulged in here, I think, in the last few weeks, concerning the attitude of labor; and that is the reason I desired to introduce it.

Mr. FERGUSON. I will say that that applies to the majority and to the best men we have.

Senator JOHNSON. Necessarily there are agitators here and there that are disagreeable and hard to deal with?

Mr. FERGUSON. Yes, sir; a considerable number; and our labor situation is rendered difficult by lack of proper places for the men to live. I think that lack of proper housing and lack of proper facilities in the town for taking care of the men are responsible for much of the unrest and number of floaters we have. Good men live at home, and even when a married man has to leave his home and live in a boarding house with about four in a room, like they are doing in Newport News, he has nothing to hold him down, and you can not expect anything from him but restlessness and discontent. Our situation has been rendered quite ridiculous, in my mind, by enormous Army activities in our neighborhood. They have built a large cantonment and a large number of warehouses, brought thousands of soldiers in there, and in a town of 30,000 population they immediately brought in from 7,000 to 8,000 additional workmen. I suppose that the town has a population now of over 60,000. We had housing facilities very well provided for. Our company had in the last year built 75 houses, which we have sold to our men. We have built a cantonment for colored men. We are putting up now a hotel barracks—the Navy furnished the money—for about 300 men, but the town is overcrowded and the Army has absorbed every available flat and house and room in town. They brought in a great raft of people, and they made no provision for them except the cantonment for the soldiers, who are going to be there two or three weeks. But we have hundreds of men who are going to be there two or three or four years, and the result of that has been that many of our men have been driven into the street and have left town. We have lost some very excellent men because their houses have been sold out from under them. Rents have gone to a point that an ordinary man could not live there and simply had to pick up and leave. Our real estate department will have from 12 to 25 men and women a day begging for accommodations. In fact, it is the kind of a thing that if you do it long enough you will never win. In the meantime, the Army wants us to outfit their transports. We have from 8 to 18 there every day, or maybe from 6 to 15, I will say, most urgently needed.

We have the Navy Department work, which we are directed to expedite in every possible way, and we have the Shipping Board work, which we are directed to expedite as much as possible; and the same week I have instructions from either one of the Government departments to give their work priority, and in the meantime the very people we are trying to serve are absorbing the facilities we must have for our people in order to do this work.

I have information this morning that they could not get any water in the shipyard. The Army has 15,000 horses there, all using water, and we have 20,000 soldiers there using water. We can not get hard coal, for which our houses are built, with latrobe stoves, yet the Army has put a lot of hard-coal stoves in their camps which might as well have burned soft coal. I took this matter up with the Secretary of War, and wrote him a letter, and discussed it with everybody in Washington I could discuss it with, and the Secretary is investigating and, I understand, proposes to put up some temporary quarters for the soldiers and the Regular officers stationed there.

Senator JOHNSON. That indicates lack of management and utter lack of cooperation.

Mr. FERGUSON. It is due to the fact that the people have the power to arbitrarily give orders without knowing the consequences of the orders they give.

Senator JOHNSON. And without knowing who else gives orders?

Mr. FERGUSON. Yes, sir.

Senator FERNALD. How many priority orders have you ever received in one week?

Mr. FERGUSON. I do not know just what you call "priority orders," but we have received instructions in one week from three Government departments to push their work, and, of course, that makes me the priority officer of the Government, and so I just tell our people, "We will do this first," because we think that is the most important. We had a battleship which we were anxious to finish, not only for military reasons but also because it was getting too hot as a commercial proposition to hold. We took a battleship about three years ago for $7,000,000, and it is worth about $15,000,000 to-day, and you can imagine where our labor and material have gone in the meantime—the material we have to finish her with. So we were anxious to get through with it, and the Navy was anxious to have her; the transports came along and they were anxious to get them, and, of course, we want to give them to them, but we could just as well have had in Newport News 8,000 to 10,000 men at work as what we had last year, and we would have had them had not this excess population come in upon us. And, of course, we brought men from the outside. I should say that the Army contractors in the neighborhood of Newport News employed in the last six months hundreds of our men. They hired many boys, helpers, and black men and paid them, to my mind, ridiculous wages.

Senator JOHNSON. They took them away from you?

Mr. FERGUSON. Oh, yes; they took them away indirectly. The men applied for the jobs, and a boy getting $6 a week, who was offered $16 a week, does not take long to make up his mind who he will work for. We got in new men repeatedly and kept up—very much to my surprise—our men at 7,500. Our best men would not leave. A me-

chanic working on a job where he has worked for years will rarely leave that job for a temporary thing, but they raised the wages of black men down there to 35 cents an hour, working for 10 hours and paid them for 11 hours, and it was entirely out of proportion to our wage, that paid by the navy yard and the going wage in the vicinity.

Senator JOHNSON. How much black labor do you use?

Mr. FERGUSON. Pretty close to 50 per cent. We have the largest number of high-grade, skilled black men in any industry anywhere.

Senator JOHNSON. Are they efficient men?

Mr. FERGUSON. They are efficient men, and they make good money. We have some black men who make, in cases I know of, as high as $90 a week.

The CHAIRMAN. Do they make good riveters?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. And they are paid the same wages as the white men?

Mr. FERGUSON. Yes, sir; and absolutely you could not run it otherwise.

The CHAIRMAN. How far is this cantonment from Newport News?

Mr. FERGUSON. We are surrounded by them. We have one at the east end and one at the north end, and south and west of us is the river.

Senator MARTIN. Are those cantonments occupied; are these people in all of them, and is there any room for you to put workmen in them?

Mr. FERGUSON. No, sir. It is only proper to state that the contractors housed about 2,500 of this 8,000 men they had in the cantonments. We endeavored to get them to house all the labor that they used and to bring all the labor in from the outside and to house it and to only hire that kind which would prevent them hiring ours. But, of course, the cantonments were put up with a great rush. This is an embarkation cantonment; it is not a regular one.

Senator JOHNSON. What was the purpose?

Mr. FERGUSON. I do not know its exact purpose. They built an enormous stretch of warehouses there at the Chesapeake & Ohio Railroad up to Morrison, 6 or 8 miles.

Senator JOHNSON. Are these warehouses finished?

Mr. FERGUSON. A good many of the warehouses are finished.

Senator JOHNSON. Are they being used?

Mr. FERGUSON. No, sir; they are not being used now, but I believe they will be. I believe they have some in use. I do not know how hany hundred cars or thousand cars of loaded material are down there ready to go in them, which, of course, has mixed up the transportation situation probably worse than any other one thing.

Senator JOHNSON. Mr. Ferguson, have you any plan about housing these people that you say you could get?

Mr. FERGUSON. Yes, sir; we have had up the housing question with the Government for some time. Had ordinary conditions prevailed, we would not have asked the Government for assistance. We have invested in the housing in the last year probably $250,000 or $300,000. We bought from Mr. Huntington, the owner of the plant, 90 houses, so that we could put out of them everybody who did not work in the shipyard. We have built 52 or 53 houses for white men and about

25 for colored men, and have sold those houses to our employees. We built a cantonment for colored men that would house 250. We were prepared to take care of our own housing situation until it became a proposition of us building houses and then having people not working in the shipyard moving into them. About three or four months ago, in fact before Gen. Goethals went out, he told me that the Government would take care of this housing situation. We preferred that they do it themselves, in order that we might be free to build ships and get house builders to build houses; but the Government rather wants us to look after it, either as a company or through another corporation, so as to get rid of the supposed evils of Government landlordship. I do not see the difference, myself. But we finally got up a proposition which we have had for months of obtaining 200 acres of land north of the city and of obtaining a piece of land in the city to build brick rows or apartment houses. We were to put up the land, we were to supervise the building of these houses and to give them our services without any cost, or at cost—certainly with no profit—and that we would rent or sell the houses to the men on terms that the Government might approve, and that we will give the Government a first mortgage on the entire property, including the land, and that we would take a second mortgage for the land. In fact, we were not counting on getting anything back from the land. We would make that as a donation to the scheme; and that is now under consideration by the Shipping Corporation.

Senator MARTIN. How long has it been under consideration?

Mr. FERGUSON. It has been under consideration by people who are familiar with the housing situation since sometime before we went into the war. It was the first thing to be considered, Senator.

Senator MARTIN. I mean the Fleet Corporation. How long has the Fleet Corporation had that under advisement?

Mr. FERGUSON. We have had a good deal of correspondence before, but now they have had a definite proposition from us, I should say, about a month and are working on it.

Senator MARTIN. You have not heard anything from it?

Mr. FERGUSON. Yes; we have. Our engineer is with them to-day. We are planning this model town with them. We have our vice president in Washington to-day on that very subject. I had a conference with an Army officer Saturday night; he was at Newport News Sunday to see if the Army, which had more or less forced this condition upon us, would not do something to help out. The Navy Department has helped a good deal, but they naturally feel as though, having had to pay the money for the plant, that some other department of the Government should do its share to help with the housing, or that the Government itself should in some way attend to it. But this proposition is up here now, and I presume as soon as they get the money from Congress or somewhere they will start on this proposition.

Senator MARTIN. If they will unite with you on that program, how long will it take you to have the houses ready for occupancy?

Mr. FERGUSON. I should say about six months.

Senator MARTIN. It takes six months?

Mr. FERGUSON. I believe so, to build anything like as large a scheme as we have—I believe that the houses could be gotten ready by the time that we will need the extra 5,000 men in the shipyard.

Senator CALDER. Have you ever taken into consideration the buildings already there?

Mr. FERGUSON. Yes, sir; that has been considered in connection with the housing, and a good many such buildings have been put up by individuals in our neighborhood, but we do not feel that there is any particular advantage in it. We are in a lumber district, and brick and cement and sand and all those things are very handy. The houses can be readily built, but it would have been impossible to have started this housing program before now, for the reason that the Army had absorbed every facility there was for building these cantonments.

Senator CALDER. Was it your idea to build these houses of brick and cement?

Mr. FERGUSON. Some brick and some wood. The frame house with us is somewhat cheaper and is probably just as salable. Our idea was to build houses on more ground than just the house occupied, so as to give the men who wanted a piece of land—and our people, you know, like detached houses in the country; that is one of the advantages out in the woods—you can have a little room around the house. Our plan was to sell these houses with a garden place and that sort of thing; and we are getting up a very splendid arrangement.

Senator CALDER. About how much do these houses cost?

Mr. FERGUSON. $2,000 or $3,000 apiece, including lights and bathrooms and all that.

Senator CALDER. Including the land?

Mr. FERGUSON. Yes, including the land. That is, the land cost would be between $150 and $200 for a house. The land that we have an option on costs $500 an acre. That is within about 2 miles of town.

Senator CALDER. How far from the shipyard?

Mr. FERGUSON. About 2½ miles.

Senator JOHNSON. Are there street-car facilities there?

Mr. FERGUSON. No. We have to go through an Army camp, and we want a street railway to go to this property. What we have proposed is that we or the street railway will borrow from the Government enough money and the street railway will, as a loan and under circumstances and guaranties that are perfectly satisfactory to the Government, extend the street railway line up to this property. The reason for having to build a new line is that most of our men come in over a line which is now congested so that now many have to walk instead of riding. And so we have to have a new car line to open up a new territory.

Senator MARTIN. Mr. Ferguson, do I understand you to say the Army officers came and took these available houses over?

Mr. FERGUSON. They came and rented the houses and quarters. They had to have them, Senator; that was the only thing they could do.

Senator HARDING. Was any organized effort made to stop the profiteering in rentals?

Mr. FERGUSON. No, sir; that led to profiteering in rentals. The Army officers, of course, looked for quarters and got them. Two or

three of them club together and pay a price for a house which a workingman could not possibly pay.

Senator HARDING. Do not these Army officers have quarters in the cantonments?

Mr. FERGUSON. No, sir; the permanent staff do not. They have quarters in town, live in the hotels, and our people, some of them, are housed in hotels; men who have to be there permanently had to leave the hotels and hunt up other places. The prices went soaring; the people who had houses that they rented for $50 a month with furniture in them, rented them to some of the officers for $150 a month.

Senator JOHNSON. That sounds like Washington.

Mr. FERGUSON. I have a clerk in my office whose house cost him $3,500, and he was offered by officers $100 a month, and it is very much the same everywhere, Senator, and it is the inevitable result of overcrowded conditions, because somebody has the money to pay the price. The effect of that is that it finally gets down to a point where a blacksmith gets pushed out in the street, and that is what has happened to a right considerable extent.

We have fought the profiteering a good deal and, as a matter of fact, I do not know what our men would have done if we had not gotten some things for them. We got hard coal for them. They had to have it. The houses were built for it, and we bought it in Pennsylvania and we brought it through and sold it to them at cost, and if we had not done that we would not have had any men in our shipyard during this cold weather.

Senator HARDING. If you are surrounded with cantonments, you would not want your shipyard made a war zone?

Mr. FERGUSON. No, sir; we do not want our shipyard made a war zone at all. As a matter of fact, we have very little difficulty on that point. I think we have four men in the shipyard who do not speak English. We have not any foreigners who amount to anything. We have naturalized foreigners. We cleared them out when the war started.

Senator SHERMAN. You would be worse off with a war zone?

Mr. FERGUSON. No, sir; I do think we could be worse off.

Senator SHERMAN. You have reached the limit?

Mr. FERGUSON. I want to say this, that the officers who have been down there, including Gen. Hutcheson, have been most considerate, have appreciated the situation, have helped us every way that they could. But although they had millions to put into cantonments for temporary soldiers, apparently they have not had money to put in for permanent quarters, and I can not see the difference. In fact, it would be less serious for us if it were the other way around.

Senator MARTIN. If you had the housing for 2,500 additional men at the shipyard it would speed up very much your construction?

Mr. FERGUSON. Yes, sir.

Senator MARTIN. But if it is put off for six months before you get it——

Mr. FERGUSON. We will lose that much. I will say that we anticipate no trouble then. Of course, we will have trouble getting skilled men. We have to bring them in; we have all the labor we want if we can get a place for them to live.

Senator MARTIN. But you do not see any way of getting it quicker than six months?

Mr. FERGUSON. We should get some houses before that time, Senator. We have in our proposition here, not only building this town of 500 houses, but of buying the property immediately opposite the shipyard and building apartment houses for men who will rent them at a reasonable rent, building the blocks up with three apartment houses in each block, four-story apartments, so that a man with simply a wife or one child can get an apartment of two or three or four or five rooms that would really be comfortable and suit the class of men who do not want to buy a home, and suit the people who want to live in town and go home to lunch. They would be near enough to the shipyards so that they could go home and come back at lunch time. There is a tremendous advantage for them to do that. In that apartment house we would put in a central heating plant and get rid of this fuel situation. It is very serious with us. The Army bought all the wood, nearly, that there was in our neighborhood, and we are furnishing wood to the men every day.

Senator MARTIN. Mr. Chairman, I suggest that the time has arrived when it is necessary for the committee to adjourn, as the President wants to address the two Houses of Congress in the House Chamber at 2.30, and the resolution will be sent over immediately for the House to adopt. It is now almost 12 o'clock.

The CHAIRMAN. Then we will take a recess until 2.30.

Senator MARTIN. I would like Mr. Ferguson to be heard further; I think he is in a position to give valuable information.

Senator FERNALD. I would like to hear him a little further myself.

(Thereupon, at 12 o'clock, noon, the committee stood at recess until 2.30 o'clock this afternoon.)

AFTER RECESS.

The hearing was resumed at the expiration of the recess.

The CHAIRMAN. When we took the recess we were dealing, I believe, with the housing question. What would you suggest as to what ought to be done in that connection, Mr. Ferguson?

Mr. FERGUSON. I think that the Government, through the shipping corporation or any other agency, should immediately provide houses for the men needed in shipbuilding, under any agreement that might be satisfactory to them. In such case our company will provide the land, supervise it for them if they want us to, and sell or rent the houses on terms that are agreeable to the agents of the Government, although we would prefer that the Government handle the whole thing through professional housebuilders instead of doing it through our own superintending force; and also that the Government immediately take steps to house their own officers and civilian employees so as to permit the shipbuilding facilities that we have provided and are providing to be utilized by getting enough men there to run them.

The War Department, I understand, now has under advisement the building or buying of about 400 or 500 portable houses, which will be located there for their employees, somewhat similar to the cantonments, but perhaps of a somewhat better construction; and

also the building of a large batchelor quarters for their civilian employees similar to the ones we have built for our employees. That would simply have the same effect, so far as the activities of the town are concerned, as if they had built them for our employees. What we want is houses built, as soon as possible, that will enable us to work 5,000 more men.

The CHAIRMAN. If the Army should take care of those houses and employees now, would that give you sufficient relief?

Mr. FERGUSON. No, sir. It would give sufficient relief under the present conditions, with the present number of men; but we have now about 8,000 men. Many of those are living under conditions which they will not continue to live under. When men move from a town where they have been living 15 or 20 years because they can not stand the life it is time somebody did something to make it livable. The Government has assisted us, through the Navy Department, to the extent of three or four million dollars, to build a great plant to build ships, and if the houses can not be provided for the men those facilities are simply a dead loss.

The CHAIRMAN. Can you get the additional 5,000 men, do you think, if you have the housing facilities?

Mr. FERGUSON. I think so. The changes in the draft regulations show signs of assisting us a great deal in our business. Of the men who are employed by us of the draft age we have 3,300 out of 8,000. Shipbuilding is a young man's business. We obtained exemption for about 25 per cent of them by certifying as to the necessity for their employment. We only asked for men who had both skill and experience, and they took probably 150 men out of our employ and put them in the Army. The Shipping Board has now arranged—and I think it is one of the best jobs of work they have done—with the Army authorities that those men, on our request, may return to the shipbuilding business. They will be on furlough, as it were, as long as they are employed in that business. There is no obligation for them to work absolutely for us, although we have to report when they leave our employ. That shows signs of helping us a great deal, and of course we feel that a man who is at all familiar with shipyard work can probably serve his country a good deal better building ships than by being a soldier.

The CHAIRMAN. Have you had any experience in building wooden ships, Mr. Ferguson?

Mr. FERGUSON. No, sir. We built a wooden tug once at Newport News, and my predecessor there, who is a wooden-ship builder, superintended that. In fact, he laid it down himself and got a few men that we had to help him, and they built this wooden tug.

The CHAIRMAN. You suggested that perhaps the work would have proceeded faster if it had been allowed to continue under private contracts. In that connection you speak with reference to the Newport News Shipyard and not with full knowledge of all conditions in all the other localities?

Mr. FERGUSON. No, sir; I do not know very much about the conditions in the other yards. I am fairly familiar with all of the older shipbuilding yards, but there are so many new yards that I have stopped keeping track of them. I do not know their conditions, but I have understood they had some difficulty in getting the timber for the wooden ships——

The CHAIRMAN. I think you have misapprehended my question. I was speaking with reference to expediting the construction of the commandeered ships, if the contracts had been allowed to proceed. Your indication was that as to your yard at least you might have gotten those ships out a little quicker than you will under the present plan.

Mr. FERGUSON. I think so.

The CHAIRMAN. But you do not know whether that will obtain throughout the country?

Mr. FERGUSON. I do not know.

Senator CALDER. Mr. Ferguson, do you think it would have been easier to increase the facilities of the old established yards than to have built all these new ones?

Mr. FERGUSON. I think you would have gotten a quicker answer, but I also think, Senator, you want to do both. I think that under the present circumstances practically nothing short of doing the most that we can in any way should be done. Although I am not a wooden-ship builder I think it is very difficult to build wooden ships for the reason that most of the wooden-ship builders are dead; but I would build any kind of ship that gives promise of helping out in this situation, and I would build it at any place possible.

Of course, I am in the business and am apt to take a somewhat partisan view of it, but judging from the freight congestion and the work going on around the seaport towns, it looks to me like everybody who has a place to build a ship or can get the men together and can build a ship should be given some of that work to do. As I said before, you will get a quicker answer by the expansion of the established yards; but, of course, the established yards were virtually all commandeered, as it were, for the service of the Navy Department.

Senator CALDER. You could have expanded your yard if you had been asked to do so?

Mr. FERGUSON. Oh, we are expanding our yard enormously now.

Senator CALDER. How much are you adding to your facilities?

Mr. FERGUSON. We are spending this year and the first half of next year between $7,000,000 and $8,000,000, expanding just as fast as we can. That expansion, however, has all taken place under the Navy Department. So far we have not gotten anything from any Government department with which we do business except the Navy Department. They have loaned us money which we had to have. They loaned us about $3,000,000; they loaned us $5,000,000. We hope it is a good loan. We have to have money, and they are the only people who have given us money, or given us anything except a great deal of advice about how to run our business. [Laughter.]

Senator HARDING. There is no premium on that, I presume?

Mr. FERGUSON. No, sir; but they have really come across with the money. I do not like to use the term so much, but somebody has got to put up some money if you are going to do anything. And Mr. Daniels—I will say this, that we shipbuilders have been fighting Mr. Daniels for many years, but I think his notion about us has changed. The last time I appeared before a committee was to answer a charge of being exorbitant. But Mr. Daniels and his department have helped us. We want help, and we can not borrow money in such large quantities, nor can anyone.

It is very necessary that you have a lot of money for some right peculiar reasons at the present time. For instance, the stock that is carried, the enormous mass of materials that you must carry, makes it necessary for you to have to-day three times as much money in your business as it was necessary to have in normal times. That money has got to come from some place if you are going to keep materials on hand. That has created a very acute condition, which the Navy Department, our principal customer, met in two ways, and they have met it with the shipbuilders generally. Now, as long as we can go ahead and do business with people who trust us and give us contracts that we feel are both fair to us and very fair to the Government we are going to do business with them.

Senator CALDER. What are you going to use this $5,000,000 for, Mr. Ferguson?

Mr. FERGUSON. Plant extensions and materials. For instance, the materials we carry in stock now amount to practically $5,000,000. In ordinary times $1,500,000 will carry all the materials we need to carry. Then there is the enormous pay roll, which requires a large reserve. At the present time, with 8,000 men, our pay roll is $200,000 a week. Nine years ago, with 2,000 men, our pay roll was $80,000 a week. The materials we are buying for destroyers are extremely expensive. We have not so much more stock material, but it takes a lot more money to run the thing.

They are putting up money for our new plant. Our contracts provide that they will put up the money under the cost-plus contracts to a certain extent of new projects, so that when the contract is finished the special depreciation due to the present abnormal labor market may be written off as a charge against the contract. If we keep on using those facilities indefinitely we pay the Government whatever they give us. The Government itself settles the price at which we will take over those facilities after the war—a perfectly proper arrangement, and the only way in which we could live, because with this $7,000,000 at the present time we are getting about $3,500,000 worth of facilities. Our earlier contracts with the Navy Department provided for 10 per cent and in the later ones a change was made providing for cost plus a fixed fee. We do not want to be in that class of people who raise wages and make more money by being inefficient. The work in the Navy Department has been quickly handled and most effectively handled, and the people who are doing Navy Department work are up with that program of construction, barring the fact that it has been very difficult to get certain materials.

Senator CALDER. They have advanced you $7,000,000?

Mr. FERGUSON. No; we are spending $7,000,000 on our plant. They have advanced us as a loan, in money, about $3,000,000, and of the $7,000,000 put into the plant they will have paid about one-half, the final adjudication of the value of it to be settled by their own board.

Senator CALDER. And then it is your expectation that you will pay back to the Navy Department all they have advanced?

Mr. FERGUSON. No; we are paying for one-half of the new plant now, and the Government is paying half. Of course, we are establishing a reserve, so that we can pay them less or more. It may be

that after the war the whole plant will not be worth much of anything. That is the real reason why we would not go into the housing business. Whether our plant after the war will be worth $4,000,000 or $20,000,000 will depend altogether on the policy of the Government after the war. You gentlemen can determine that. So the risk that goes with the ownership of these houses is a risk that can only be taken by whoever has the power to affect the value of the houses after the war. If we do not do any more business than we did before the war we will have just about two times too much shipyard. If we do not build any more warships and keep up with merchant shipbuilding, our plant will not be operating in such a way as to make real-estate investments in that neighborhood worth much.

Senator CALDER. On what basis are your contracts with the Navy Department?

Mr. FERGUSON. The basis of the cruiser and battleship contracts is cost plus 10 per cent. The basis of the first destroyer contracts was cost plus 10 per cent, and of the later ones cost plus a fixed sum, which, after taking out excess-profits and income taxes, will amount to about 5 or 6 per cent. The reason for that was that in the later contracts they put up the facilities, and in such a case, of course, we are satisfied with a smaller return.

In that connection I would like to say that the fixing of the percentage in a contract depends upon the turnover in a year, and in normal times a shipyard will produce three-quarters of its cost in a year in product, and in times like these it will produce its entire cost in product. So the turnover is not more than 10 per cent of the value of the plant, and if you assume that owners get 5 per cent, as they do in our case, and that you require another 5 per cent for extensions and improvements, as we have required for the last 10 years, it is about as little as you can live under. And that is something that is very much mixed in the minds of many people. A contractor for buildings of this kind can make more money building them for three and a half per cent than in building ships at 10 per cent.

Senator CALDER. Well, the Government takes care of a portion of that, does it not?

Mr. FERGUSON. Yes; it does. That was not an entirely fair statement, because it does take care of the fixed charges.

Senator CALDER. Does it not take into consideration the wear and tear on the plant?

Mr. FERGUSON. Yes; it does take in the ordinary factors of cost. It does not take care of developments; it takes care of maintenance but not extensions as items of cost.

Senator CALDER. Does it allow anything for the interest on your money?

Mr. FERGUSON. Yes; if you borrow money on the transaction it allows that. It does not allow or under a recent ruling has not allowed excess profit and income taxes, which, of course, are getting to be a very considerable factor. So that in the case of cost plus a fixed sum none of us are in a position to know what we will finally get on the contract on account of the excess profit and income taxes.

Senator CALDER. Those cost plus percentage contracts you took prior to the present war, did you not?

Mr. FERGUSON. Previous to our entry in the present war we had taken some contracts on cost plus percentage with the Navy Depart-

ment. We prefer as contractors not to take work on a cost plus percentage basis, because the effect of that on an organization is not always what could be desired; but with the most uncertain labor and material market that we have in war times it is the only way that I would take a contract. I would rather have it, not cost plus percentage but cost plus a fixed fee, and then probably a provision for a variation in price, so that if you came below an estimated price you would get something, and if you went above that price you would lose something. An ordinary charge of 10 per cent lets the man make the most money who runs the poorest business.

Senator FERNALD. If the Government places no limit on expenditures for labor and material.

Mr. FERGUSON. Yes. But the prices paid for material in the case of the Navy Department must be viséd and approved by the agents of that department. The machinery that has been worked out for determining those prices is very complete. They have in the plant a cost-inspection board, which, incidentally, the Secretary of the Navy has offered to lend to the Emergency Fleet Corporation. This board consists of officers and expert accountants—the regular officers who are stationed there, with the addition of a paymaster, who is an expert accountant, with a staff of men, who check the material bills and the labor bills, with the books of the company, and on whose approval all our bills are paid at the end of each month. As a working scheme we thought it would be a good deal of trouble, but, as a matter of fact, we have had very little trouble with it at Newport News. They have a compensation board at Washington that passes on it, and they have a fairly uniform system of accounting.

Under our contracts it did not move fast enough, because our material bills became due before we got the money from the Government. In that case the Secretary authorized the paymaster to pay for the material as it came into the yards, and immediately cut loose from the contract in that respect and pay these bills, for the material was there and the men knew it was there. That material is the Government's and is held subject to its orders.

As a working scheme it is very good. We have had no trouble with it at all, and I do not hear of it once a month. It is as clean a method of doing this as you could devise, in my judgment. Of course, the cost plus percentage arrangement implies that the people indulging in it have a good deal of mutual confidence, because the returns may be stuffed a good deal. We agree that the Government will pay the men who work on their work no greater wages than the men who work on the ordinary work. Of course, we are partners with them in this. We pay the current prices for material, but the whole thing is operated just as carefully as if they were spending their own money.

Senator FERNALD. Would you think that would be a poor policy for the Government or an individual to pursue?

Mr. FERGUSON. Well, I don't know. In a fixed business it might be a pretty good policy. It would be a bad policy to pursue with concerns that were not responsible and did not have a good dead of conscience. Whether that policy would gradually wear off the sensitiveness of consciences I do not know, but actually the Government, of course, does all its own business in that same way. It pays people

so much, regardless of the exact performance of what they do. There is one thing it does at the present time with the Government; it puts the handling of the labor problem in the Government's hands, and that, from our viewpoint, is quite necessary.

Senator FERNALD. What effect do the prices you are paying for labor have upon the other industries; or haven't you any other industries in your immediate locality there?

Mr. FERGUSON. Well, it takes the men off the farms; it takes a good many of the oystermen off the river. Of course, the wages we pay are the wages paid by the Government at the navy yard. Its wages, in accordance with the law, are the going wages in the vicinity, but they have managed to go about 10 per cent ahead of ours, and we are engaged in an endeavor to keep up with them. As long as we pay on the Government work the wages the Government pays for similar work, we do not feel that we are overpaying our men. If a man is working for you on a Government job on a cost-plus contract or any other kind of contract, he says, "You must treat me the same as the Government does," and we have no answer to that. In special cases we go a little above that, but our average is somewhat less, because private industry always uses a smaller percentage of first-class men than the Government is apt to use.

There is one point I would like to make in reference to the housing question, about the houses that we have built—and we have built quite a few and sold them to our men. In order that there may be no misunderstanding, I want to say that those houses have been sold to the men on small payments on a percentage basis, and without any profit at all to the company. I mean, we are not in the house-renting business, except as a vital necessity; we simply indorse their paper to the bank until the loan gets to be a banking proposition, and then the banks carry the loan at the same rate.

Senator FERNALD. We hear some complaint about the high cost of living, and I presume you have heard it, too?

Mr. FERGUSON. Yes, sir.

Senator FERNALD. This business of yours takes a great many of the farm hands, does it not?

Mr. FERGUSON. We get a good many men from the farms, but we get more, I think, from the small towns.

Senator FERNALD. But naturally it would advance the price of labor on the farms?

Mr. FERGUSON. Oh, undoubtedly. Labor tends to seek the same level everywhere, of course.

Senator FERNALD. So it is almost necessary for farmers to charge rather increased prices, and that makes the cost of living considerably higher?

Mr. FERGUSON. My farmer friends tell me they have great difficulty in keeping up. Farm labor, of course, has gone up enormously with us.

Senator FERNALD. Farms do not develop much in your vicinity?

Mr. FERGUSON. Very little. We get most of our men from the interior and from farms. I notice from the testimony here that there has been a great deal of difficulty where the shipbuilders are taking each other's men. We have not taken a man from any other shipbuilder in probably two years. We get most of them from the smaller centers.

Senator CALDER. Has the organization of these new plants tendered to disrupt the older organizations?

Mr. FERGUSON. There is one new plant that would look like the Newport News shipyard if you looked over the bosses and foremen.

Senator CALDER. They got your men by offering them better pay?

Mr. FERGUSON. Oh, yes.

Senator FERNALD. Does the Government recognize that?

Mr. FERGUSON. No, sir.

Senator CALDER. What plant is that?

Mr. FERGUSON. The Federal Shipbuilding Co. is the one.

Senator CALDER. Is there any other one?

Mr. FERGUSON. Another one is the Seattle Dry Dock & Construction Co. Of course we expect to lose a certain number of men. If a man comes to you and says, "I want to get this man, who is a draftsman, and make him a chief draftsman," no one would stand in the man's way; it is only when a man is employed from one job to a similar job in another place that it is objectionable. We expect to lose a considerable number, but we have been able to stand it pretty well, and I think we are getting along about as well as we did.

Senator FERNALD. When another shipbuilding company offers a higher price than you and they are working on the same business for the Government, how does the Government adjust that matter?

Mr. FERGUSON. The Government now requires, through the Shipping Corporation, or at least is about to require, that we shipbuilders pay the wages of the nearest navy yard, and pay no more.

Senator FERNALD. But that has not existed up to this time, has it?

Mr. FERGUSON. No; it has not; it has just been put into effect. But that is the only way to settle the labor question in any particular community—for the Government and the people working for the Government to pay a uniform wage.

Senator CALDER. How much of an increase were your men accorded in 1917 over 1916?

Mr. FERGUSON. I should say about 35 to 40 per cent since 1916. Our weekly wage has increased very much more than our rate. Of course when a man wants more money he always wants so much an hour, but we people who manage things try to base it on what we pay them a week. Our average wage paid per week to men and boys, white and black alike, is about $25 now. When I went to Newport News 12 years ago our average wage paid per week was about $9.50. A large part of that is due to the increase in the hourly rate, but some of it is also due to overtime. We adopted the eight-hour day about eight months ago, and of course that increased our cost.

Senator CALDER. Do the eastern yards work eight hours generally?

Mr. FERGUSON. I think so. I think all the shipyards are working now on an eight-hour basis.

Senator CALDER. Do you pay the 10 per cent war premium that they pay in the West?

Mr. FERGUSON. We have paid on our own account, and are paying, 5 per cent a week to every man and boy that makes a full week.

Senator CALDER. And you charge that up on the cost of the ship?

Mr. FERGUSON. Oh, that goes in his wages just the same as the rest. That is simply a bonus for regular attendance. I think that has helped some, because we have had a very regular attendance. I think our average attendance is about 85 or 86 per cent of the men on the rolls, and if you allow for about 8 or 10 per cent on the sick list, we have a pretty good attendance.

Senator CALDER. Is the practice general in the East of allowing this war premium?

Mr. FERGUSON. I do not think so; some people do not do it.

Senator CALDER. Is yours a union yard?

Mr. FERGUSON. No, sir.

Mr. CALDER. The open shop?

Mr. FERGUSON. The open shop. Of course our men are unionized in certain trades, as in the metal trades, but we have shop committees and deal with the men whether they are organized or unorganized.

Senator CALDER. Did you ever have a strike in your yard of any considerable proportions?

Mr. FERGUSON. We had a strike of three and a half days last summer, but they all came back. We settled it up without any further trouble.

Senator JOHNSON. Perhaps, Mr. Ferguson, I have been wholly misinformed. If I have been, I beg you to correct me. I have been told that you rather severely criticized the Shipping Board. Is that correct?

Mr. FERGUSON. No, sir; I do not think so; not any more than I have this morning with you gentlemen. I do not think I have said anything about the Shipping Board that I have not said to them.

Senator JOHNSON. I do not mean that you had criticized them in hostility to them, but that you had criticized their activities and asserted that they had been guilty of some delays. If that is inaccurate, I beg you to correct me.

Mr. FERGUSON. Well, I think they have been guilty of some delays; I do not mean to say in any improper sense. I think nothing whatever has happened, though, that could not have been readily foreseen. With the new organization, with new men, and with the majority of them perfectly new to the business, I do not think anything unexpected has happened at all, Senator.

Senator JOHNSON. When you say "anything unexpected" what do you mean?

Mr. FERGUSON. I mean you must expect confusion; you must expect——

Senator JOHNSON (interposing). Has there been confusion?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. You must expect what else?

Mr. FERGUSON. You must expect delay.

Senator JOHNSON. Has there been delay?

Mr. FERGUSON. Some.

Senator JOHNSON. What else must you expect?

Mr. FERGUSON. I think you must expect an investigation, then. [Laughter.]

Senator JOHNSON. That investigation you expect would be justified?

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. All right, sir.

Mr. FERGUSON. I want to say this now about my criticism; I would just like to amplify that. I am on very friendly terms with everyone who has been with the Shipping Board——

Senator JOHNSON. I think we all are, and I did not ask that question with any hostile intent at all, but because it was conveyed to me this morning that you had indulged in some criticism.

Mr. FERGUSON. I hope I have; I hope it has not been wholly unwarranted, and I hope it has not been wholly unkind, Senator. But I would like to say this: That this is the first time since this war started, so far as I know, that any responsible shipbuilder has been asked by responsible people as to what he really thinks of this whole shipbuilding situation. We have had councils and committees and various people in conference passing on everything from shoes and uniforms to steel and everything else under the sun. And as I hope a fairly responsible man in a right good profession, I do not know who has asked any shipbuilder, except in conversation perhaps, or has asked any body of shipbuilders, as to what should be done in order to get the maximum production of ships.

We people do not know so much, and we are willing to grant we are right slow, but we do know more than men who have not built ships, and we know more about building any kind of ship then men who have not built ships, and we have built some ships. And we may not be much, but we are the best they have. I do not mean to say that in the management business men would not handle the management of business affairs better, but I do mean to say that people who have put their lives in the business have not been consulted authoritatively or even employed authoritatively to do this work.

Senator JOHNSON. Do you mean to say this is the first opportunity that has been accorded a skilled shipbuilder to express his views on the situation? I mean this investigation.

Mr. FERGUSON. Officially?

Senator JOHNSON. Yes.

Mr. FERGUSON. Yes, sir.

Senator JOHNSON. This investigation just now?

Mr. FERGUSON. Yes. I have been asked about this, that, and the other point, and I have been on a number of committees to prepare designs; but as to this program, as to how we are going to build the ships and how it is going to be done in the best way to promote the business of building ships, shipbuilders have not been asked and have been on no council whatever.

Senator HARDING. Do you think our shipping program would have been accelerated and made more efficient if we had had a shipbuilder in charge of operations?

Mr. FERGUSON. Why, yes, sir.

Senator HARDING. Do you know if any shipbuilder was ever asked to serve in a managerial capacity for the Shipping Board?

Mr. FERGUSON. No. The Shipping Board has very good shipbuilders now in minor capacities, and it has perfectly splendid men who are running it, but when you come to the question of planning what you are going to do, your plan when once made may never be corrected again; and whether the Hog Island yard should have 50 ways or 150 ways, after they are down you can not help that.

Now, my judgment is, as a shipbuilder and a man used to working men, that instead of congestion you want diversion in building ships. You build the maximum number of ships if you build them in the maximum number of places. I mean the problem is entirely different from building 50 ships; you want to build all the ships possible.

Senator HARDING. You do not know of any instance where a practical shipbuilder was ever asked to take charge of this work?

Mr. FERGUSON. Why, I was asked to become the general manager of the Emergency Fleet Corporation after Admiral Capps resigned.

Senator HARDING. When was that, Mr. Ferguson?

Mr. FERGUSON. That was about a month ago or six weeks ago—two months ago.

Senator HARDING. Nobody was asked in the early stages of this tremendous undertaking?

Mr. FERGUSON. No; and I was not asked to take the position that Admiral Capps and Gen. Goethals had had, or I would have taken it. I was asked to take a position that had been robbed of its power.

Senator HARDING. I wish you would make that a little clearer.

Mr. FERGUSON. Gen. Goethals, under the by-laws of the Emergency Fleet Corporation, had complete charge of all the work of building these ships, with the sole exception of signing the contracts.

Senator HARDING. What did they want you to do?

Mr. FERGUSON. They wanted me to take charge, under Mr. Hurley and under Mr. Piez, as vice president, and be general manager of the corporation. I would have been very glad to do it in any case, except, as I told them, I could do better work in Newport News, and if they needed assistants there were plenty of men who could assist them as well as or better than I could.

Senator FERNALD. If you could have had full charge would you have accepted the position, Mr. Ferguson?

Mr. FERGUSON. Certainly; I would accept any position where I can best serve, but I won't accept a job that is not what it purports to be. Admiral Harris took it, and you saw what happened to him. It is not a working proposition. They have very able assistants. But I will say this, I think this thing is working very well now. Personally I have been more encouraged since I have been in Washington this time and around the Shipping Board than I have been at all. Mr. Piez is a very fine and splendid man; I do not question that at all.

Senator FERNALD. Has he ever built any ships?

Mr. FERGUSON. No; but I think he will settle on a policy. The Shipping Board program was started too suddenly; that is, they wanted to do something quickly. Now, in building the time to take your time is when you are talking about how you are going to do a thing; then you can speed up later. We started in too rapidly; we started in to build ships and end this war immediately. As a result the plans for the ships have had to be changed, as was inevitable, and the whole thing got very much mixed up, and with changes in management it was inevitable that there should be delay and confusion. I do not see how it could be otherwise.

Senator MARTIN. You took the position that you would have been subordinate to the people who were not shipbuilders?

Mr. FERGUSON. Yes. They were good enough to say we would all work together, which is all right——

Senator MARTIN. But still you would have been subordinate; you would not have been in authority; you would have had to take orders from people who did not know anything about building ships?

Mr. FERGUSON. Yes.

Senator MARTIN. And that was the reason you did not accept that proposition?

Mr. FERGUSON. That was one reason; and then it would have been very awkward for me and for them, too, because every shipbuilder that came in there to do business would come to see me, and I would have had to send him on to somebody else, and he would probably ask me what I was there for. It would make me look ridiculous and would make my superior officers look ridiculous. You can not work it that way. I do not think it is vital that you have any shipbuilder at the head of this thing as long as there is shipbuilding talent there, but a permanent organization that will be able to conduct the thing is a vital necessity. You can not change your organization every little while.

There are some splendid shipbuilders there. I think Admiral Bowles is a man of extraordinary ability. Admiral Bowles is somewhat arbitrary at times, but I will tell you he will never let anything stop. He knows the business, and he knows the people in the business, and I think he is a splendid man. In fact, when this shipbuilding program was first started, right in the beginning it was the suggestion of many men that a man like that would be a good man, because we all appreciate that war times are arbitrary, and perhaps people who are decisive are needed to make things go. It will never stop with him; there will be something doing all the time.

Senator HARDING. You think a real shipbuilder in charge in the beginning of this work would have been able to fix a policy?

Mr. FERGUSON. I think he would have gotten along somewhat faster. At the present time I doubt very much if it is not going just as well as it can. These ships, after all, Senator, must be designed. The next trouble will be when the ships are finished, or supposedly finished. The really important part of our business is to get our designs right, so that when we have built a thing it will be a ship. No one knows whether these ships are going to give them much trouble or no trouble. They have certain new features. No one knows about the wooden ships. My personal opinion is that if you get 20 per cent of them all right you will be doing pretty well.

Senator HARDING. You mean one in five?

Mr. FERGUSON. Yes.

Senator CALDER. In other words, if one ship in five is able to cross the ocean safely we will have done well?

Mr. FERGUSON. I think so.

Senator HARDING. Why is that, Mr. Ferguson?

Mr. FERGUSON. They are 268 or 270 feet long. My testimony is secondhand, but men who build wooden ships tell me they do not do very well that long. When they get 268 feet long they "hog"; the ends go down and the middle goes up. We dock wooden ships where the middle of them is 4 to 6 feet higher than the ends. Perhaps that is something that will be overcome in these ships, but I do not think so. I do not mean to say those wooden ships will be useless; I think that in the coastwise trade, for instance, they will come in very handy.

There are many people building ships that do not know how to build ships. There are some wooden-ship builders in this country, but most of them are dead. Building a wooden ship is very much more difficult than building a steel ship, for a very simple reason. You work in solids; it is a geometrical proposition. A man has got to fit one solid crooked piece on another solid crooked piece. In steel-ship building we work on lines and surfaces. Some of the men who build wooden ships are the best steel-ship builders, just as my predecessor at Newport News, I think, is the best wood and steel ship builder I ever knew.

Senator JOHNSON. What have you to say as to the steel ships?

Mr. FERGUSON. There are some minor difficulties, but none, I think, that can not be overcome, because the design is all right. There are some features in the steel ships that may give trouble, like the geared turbines. The propelling machinery is mostly geared turbines. But I do not think there will be any difficulties that can not be overcome.

Senator FERNALD. Are the designs practically the same for all the steel ships built at the different yards?

Mr. FERGUSON. I think they are very much along the same lines. I understood Mr. Ferris got most of them out, and Mr. Ferris has been working with us and designing ships that we have built for the last 12 years. I think these ships in a great many of their details are very much like Newport News ships.

The CHAIRMAN. Mr. Ferguson, what would you say about a wooden ship of less than 268 feet, say 200 feet long?

Mr. FERGUSON. I have been told by some wooden-ship builders that 200 feet is a very good length for a wooden ship, in order to prevent that longitudinal stress that you have in a long ship.

The CHAIRMAN. If you have them all that size you would have more material available for building them, too, would you not?

Mr. FERGUSON. No, sir; you would not have as much to carry the same number of tons. I have always been told that there was a fairly definite limit to the size of wooden ships. Wooden ships were built in the Civil War of the size of these. The "90-day gunboats" were of about the size of these, and most of them had a right sad career.

The CHAIRMAN. You did not understand my question. If these ships were of less size, say 2,500 tons, there would be more yellow pine, for instance?

Mr. FERGUSON. More that would be available for those ships; yes, sir.

The CHAIRMAN. And would not a ship of that tonnage probably serve just as good a purpose really? Would it not be as efficient?

Mr. FERGUSON. It would not be quite as efficient, Senator, but if it were a good ship it would be the best you could do. As a matter of fact, I think the trouble with the small ship is that the small ship must carry enough coal or oil to go to Europe and back. If you make the ship small enough she will just carry enough to do that and no more; so she would go over to Europe and back without carrying any cargo at all; that is, if you made the ship small enough. If a ship is 4,000 tons dead weight, or even 5,000 tons dead weight, a very large proportion of its total dead-weight-carrying capacity is taken up with fuel to carry it across and back, because these ships must carry enough fuel for the round trip. On the other hand, if you

take ships of 9,000 or 10,000 tons the proportionate amount of cargo space that must be given up to fuel is very much less. If we could get fuel on the other side the smaller ship would be much more desirable, and I think that has been the idea of the Shipping Board. I would not say at all not to build these wooden ships if the wood is available and they may be built.

Senator HARDING. What happens to the ship that "hogs," as you say.

Mr. FERGUSON. She goes to sea just the same.

Senator HARDING. It is still seaworthy?

Mr. FERGUSON. Still seaworthy; yes. If she gets too bad, however, and the seams open, it is otherwise. I have seen them hog 6 feet, and you put them on level blocks and they will come up just as nice as you please. They all hog.

Senator RANSDELL. About what would be the tonnage capacity of these 200-foot ships?

Mr. FERGUSON. I do not know, sir, how much they would carry. I should say two-thirds of what these 268-foot ships carry.

Senator RANSDELL. What do they carry?

Mr. FERGUSON. I do not know, sir.

The CHAIRMAN. They are 3,500 tons dead-weight—the Ferris type.

Mr. FERGUSON. I am simply saying that the 268-foot ship struck a good many of us as being a long ship to build.

The CHAIRMAN. With reference to the yards, Mr. Ferguson, what have you to say with regard to locating Government plants at Hog Island and Bristol, Pa., and New Jersey—three Government plants there within a radius of 50 miles.

Mr. FERGUSON. I would not have done it sir; I would not have advised doing it.

The CHAIRMAN. Everything considered, do you not think it would be advisable to locate a large plant of that sort, building for the Government, in a milder climate, where there was not such congestion of freight, etc.?

Mr. FERGUSON. I do not know, sir, what I would do. Of course. the water has gone over the dam, and it is more or less speculative, but it seems to me I would not build such large plants anywhere; I would build a large number of small places wherever the men who were going to do the work were already living, or where your excess population could be easily taken care of.

Philadelphia is the shipbuilding center of this country. Under normal conditions it is the best place to get shipbuilding labor. Probably under present conditions it is the worst place to get shipbuilding labor, because not only do they have shipbuilding but also munition manufacturing now. It is largely a question of housing and feeding and transporting your labor.

The whole situation there is congested. They might put in a few smaller plants, but to put up these enormous plants within that small radius is, I think, not very sound unless you add somehow to the housing facilities there. But apart from that, if 50 ways are put in one yard and men are put to work on 50 ships at one time, you have introduced a labor problem that, I believe, is different from anything that anybody ever thought of before. You have introduced a question of working thousands and thousands of men more in one

shipyard than anybody has worked in one shipyard before. That means that the transportation of these men becomes quite a problem, and the handling of the men becomes a problem.

Men who handle men, and corporations, for instance, who for financial reasons expand their plants, do not keep building onto the same plant indefinitely; they go to new places. Maybe somebody can work 10,000 riveters inside of one fence, but a good many of us have right much difficulty at times working a thousand in one fence. Your labor problems are rendered right difficult. On the other hand, as there is no object whatever in building 50 ways right here together, you may as well build them all up and down Chesapeake Bay, and down in Wilmington, Charleston, and Jacksonville. When the problem is that of building the hulls, with the machinery built outside, a plan which is being adopted by the Shipping Board to a large extent, the solution is to scatter these activities so as to handle the man problem and so as to handle the housing problem.

For instance, in Alexandria, if your hulls are of the standard type, and if you have the men to show them how you can build six hulls easier than you can build six hulls in Philadelphia. I would a great deal rather have the job of doing it. There is a town of 25,000 people into which you can put 500 men and never feel the housing situation. There are lots of men around the water front there that could be taken into this work.

The assumption that I have in mind is the thought that we would have to build the ships with men who are not now shipbuilders. We have got to make shipbuilders; you can make shipbuilders better by making them where they are than by offering to transport them into the country where they do not live and where they do not want to live. That has been done, however, with the building of all these new plants.

And I think that, to my mind, is the best solution of a maximum production.

The CHAIRMAN. What do you think of the fabricated ships?

Mr. FERGUSON. I think they are all right, Mr. Chairman. The idea of the fabricated ship, or standardized ship, is something that we shipbuilders have dreamed about for years. We never had an opportunity to build them. The only keen disappointment that I have, so far as the building of fabricated ships is concerned, is that I am afraid our company will not get a chance to build some. I can see how fabricated ships could be turned out by us at a cost, speed, and general character comparing favorably with the other fabricated ships. But we will have to build the other type of ship.

I think the idea of fabricated ships is perfectly safe and sound, and that it will save a great deal along certain lines.

The CHAIRMAN. And you think it ought to be just as good a ship, do you?

Mr. FERGUSON. It will be just as good a ship as any other ship. There is no reason why it should not be. And the Government being the only purchaser, is in the position of establishing a standard, as anyone would be. If you were buying personally 500 ships, you would get many of them alike.

The CHAIRMAN. Do you apprehend that there need be any delay in getting the machinery and equipment for those wood hulls and for the other ships as they may be needed?

Mr. FERGUSON. I expect there will be some delay. But I understand that they let the machinery widely all over the country, and that the work is going ahead. I do not know very much about that, because I am kept busy looking after our own delays. I know that you have to have an extraordinarily efficient follow-up system in order to get anything now.

Senator BANKHEAD. How long would it take you to build a 7,500-ton steel ship if you had the material all on hand?

Mr. FERGUSON. In the ordinary course of events, from the time we lay the keel until delivery, about six months.

Senator BANKHEAD. That is, supposing you had the material and you had no trouble about that; that you had it on the ground?

Mr. FERGUSON. It would take about six months from laying keels until finished ship as we work. Of course, if we only built one ship and wanted to see how fast we could build it, I suppose we could build it in 90 days.

Senator BANKHEAD. You do not mean you could build the ship and install the machinery in six months?

Mr. FERGUSON. Oh, yes; we could complete the ship in six months and install the machinery. We have done it frequently.

Senator RANSDELL. I understood you to say, Mr. Ferguson, that it would take a year and a half, or 15 months anyhow, to install one of those oil tankers?

Mr. FERGUSON. Yes, sir.

Senator RANSDELL. Why does it take so long in that case?

Mr. FERGUSON. It will not take more than eight months after we start.

Senator RANSDELL. Oh, then you do not expect to start for some time?

Mr. FERGUSON. The big thing is to get things ready to begin; it takes more time to do that than it does to do the actual work under present conditions.

Senator BANKHEAD. You said a while ago that you had had no experience in building wooden ships except what you have heard?

Mr. FERGUSON. Yes, sir.

Senator BANKHEAD. What is your impression, from what you have heard, of the time necessary to build a 3,500-ton wooden ship, if the lumber was on the ground, and all that sort of thing?

Mr. FERGUSON. I think you would possibly build in a shorter time if you had a skilled organized force.

Senator BANKHEAD. You could build one of those in six months, could you?

Mr. FERGUSON. Oh, yes.

Senator BANKHEAD. Would you build one in four months?

Mr. FERGUSON. I do not know, but I think you could build them in less time if you had the men to build them with.

Senator BANKHEAD. Of course, I am assuming that you would have the men to build them with. What I wanted to know was if you could build them if you had everything to build them with. The reason I am asking the question is that they are talking about taking a year and a half or two years to build these ships.

Mr. FERGUSON. Of course, if all we had to do was to build one ship—or anybody else for that matter—and we should start right

now, we could build it very much quicker. But your shipbuilding program is carried on with relation to your total annual production.

Senator BANKHEAD. Well, I had that in mind.

Mr. FERGUSON. But I should think they could build the wooden ships just as quickly as they could the steel ships if they had the men, and I say "if they had the men" because I rather doubt if they have the men.

Senator BANKHEAD. Well, of course, it is rather difficult to get them.

Senator RANSDELL. Is it more difficult to build wooden ships than to build steel ships?

Mr. FERGUSON. I never tried to build wooden ships. The same number of men could build more steel ships than wooden ships.

Senator RANSDELL. You consider it more difficult to build wooden ships?

Mr. FERGUSON. Yes. For instance, a wooden ship to carry 5,000 tons of freight will weigh approximately twice what a steel ship that will carry the same amount of freight will weigh.

Senator BANKHEAD. That is, it will weigh twice as much as the steel ship?

Mr. FERGUSON. Yes; the hull will, not the machinery. On the other hand, your material, if you build down on the Gulf coast, is a very much simpler matter; and I believed in building wooden ships, because you would use facilities that would not otherwise be utilized; there is no question about that, even if they are not as quick in building. There will be less delay ordinarily in getting the material for a wooden ship than for a steel ship, and particularly certain kinds of material; forgings and steel castings are now rather scarce. Now, facilities are being provided, but they do not exist at this time.

Senator BANKHEAD. That difficulty is being overcome, is it?

Mr. FERGUSON. I hope so; yes, sir; it is being overcome. The situation is getting distinctly better all the time, as to total production.

The CHAIRMAN. Then, in the main, you think it was a wise thing to undertake to build the wooden ships and the steel ships both?

Mr. FERGUSON. Yes, sir; I think they may have overdone the wooden shipbuilding a little, but I think that the idea was perfectly sound of building both, in order to get the maximum number of ships.

The CHAIRMAN. What have you to say about the composite ships?

Mr. FERGUSON. I do not know much about the composite ships. They are building some of them. I understand, however, that you have all the troubles of both systems with them; you have the steel situation in it to a considerable extent, and, of course, you also have the yellow pine and the Oregon pine to contend with.

Senator BANKHEAD. You would not have the composite ships built if you were in charge?

Mr. FERGUSON. I would not have the composite ships built. You do either one thing or another, either lessen your difficulties or increase them.

Senator RANSDELL. What can you say about the reinforced concrete ships?

Mr. FERGUSON. I do not know anything about them, except that I have seen pictures of barges, and things like that. I do not think we will use many of them in this war.

Senator JONES. Why do you say that you think we have overdone the wooden ship?

Mr. FERGUSON. Well, I think that we started to build so many of them before we had settled the actual building of ships on the real type we wanted.

Senator JONES. You did not mean by that that you thought we were building too many wooden ships?

Mr. FERGUSON. No, sir; I do not think they are ordering too many of any kind; but I think we went ahead before we were ready, as I think is evidenced by the numerous changes of designs that were made. We shipbuilders had rather know the design of a ship before we build so many. And as I was explaining, it is the difference between rushing in the beginning and getting it right and then beginning.

The CHAIRMAN. Do you think the changes in the designs effected some delays in construction?

Mr. FERGUSON. It is bound to do so. You can not change designs without making delays. There is no method of changing designs at all without causing delay that I know of, because, if it does nothing else, it indicates a doubt in your own mind that makes for delay.

Senator CALDER. In recent years, have many wooden ships been built for over-sea trade?

Mr. FERGUSON. No, sir; none that I know of.

Senator CALDER. At least, none to be operated by steam?

Mr. FERGUSON. I do not know of any. Of course, the schooners and barges are still built around Bath, Me., and wooden vessels are built, small vessels, here and there, especially on the west coast.

Senator CALDER. But the men operating and owning ships have not been handling wooden ships because they are not as profitable?

Mr. FERGUSON. They are not as profitable. The deterioration is greater, and the upkeep is greater, and as an owning proposition a steel ship is a better proposition than a wooden ship.

A steel ship is tight, and a wooden ship probably is not. Of course, I know something about that, because we repair them and do calking and put new posts in them right along. But even so, if I could build any kind of a ship—whether a concrete ship or any other kind of a ship—that would give promise of being the right thing, I would build them.

Senator CALDER. Mr. Ferguson, have you any notion of the tonnage of shipping that will be put into commission during this year for the Shipping Board?

Mr. FERGUSON. No, sir; I do not know.

Senator CALDER. What would be your estimate?

Mr. FERGUSON. Oh, I should say about 3,000,000 dead-weight tons.

Senator CALDER. Do you think it will be that many?

Mr. FERGUSON. I think we will come very close to that. The number of men employed in the business, I noticed from looking this morning at Mr. Hurley's testimony given a short while ago, was 150,000, and that will give you the clearest index, if they all work

under proper supervision, of what will be produced in weight of tonnage.

The CHAIRMAN. The purpose is to increase that very materially, is it not?

Mr. FERGUSON. Yes, sir. Now, if that is increased, and the men get the materials, there is no reason why the tonnage should not be increased. There is no real reason, to my mind, if we set our heads to it and put up the money, and have to do it, why we should not build at the rate of 5,000,000 tons of ships a year, or even 10,000,000 tons a year.

Senator FERNALD. Do you think 10,000,000 tons a year is possible?

Mr. FERGUSON. I think 10,000,000 tons a year is possible; yes, sir.

Senator CALDER. Not this year?

Mr. FERGUSON. No; it will take three years to work up to it, but I think we could work up to it.

Senator FERNALD. But not with the present yards?

Mr. FERGUSON. No, not with the present yards. No; I mean the country's ability to build ships. If you mean the country's ability to build ships, I do not know any limit to what we can do.

Senator FERNALD. We could build up to 20,000,000?

Mr. FERGUSON. I do not know about that.

Senator FERNALD. But not with the present yards?

Mr. FERGUSON. Not with the present yards. I think we ought to build up to 5,000,000 tons; but I think it would be up to the end of next year before we get up to that rate. But we should get 3,000,000 tons within the next year, and perhaps more. That depends upon how rapidly and effectively the new labor for these yards is broken in, and how well they are managed, and how the general labor situation is handled. That is the crux of the output, because, after all, all we can do is to convert men days into ships, and it takes just so many men days to build so many tons of ships, on the average. If you assume that a man working a year will produce 25 dead-weight tons of an ordinary ship, or 20 tons of an oil ship, or 12½ tons of a passenger ship, and you have the men in the business, you can figure possible tonnage just as well as I can. And that is what it is based on, that it takes so many hundreds of hours for so many men to build a ship. We have 150,000 men now. And when we have a double number of men, that will not double our output at once because it takes time to break in the men.

Senator JOHNSON. How many tons of ships a year could you turn out in your yard?

Mr. FERGUSON. If we were equipped to turn out these standard ships and nothing else, I do not know how much, but I think we might work up to 350,000, or 400,000, or even 500,000 tons. That would depend upon having a yard laid out for them. We could now, with our present men and our present equipment, turn out 200,000 tons a year. But with a much more specialized plant we could build more than that.

Senator JOHNSON. Have you ever been at Hog Island?

Mr. FERGUSON. I have seen it.

Senator JOHNSON. Are you familiar with the conditions there?

Mr. FERGUSON. I know something about them.

Senator JOHNSON. Is the undertaking advancing rapidly, do you know, or is it an undertaking that was justified?

Mr. FERGUSON. I believe so; yes, sir. I think it is a very large place to have in one fence. I think that 50 ways are a great many ways to have at once place; but that is a matter of judgment.

Senator JOHNSON. You say 50 ways. Was that the number contemplated by the original contract?

Mr. FERGUSON. I think so.

Senator JOHNSON. Now, if you had an additional contract for 70 ships, would that mean additional ways?

Mr. FERGUSON. No, sir; we would count on building a ship on those ways, I should say, about every six months, launching two a year. That is what we do. We launch two ships a year, sometimes two and a half a year, of the ordinary type of ship. But I think 50 ways in one place are a lot of ways; I would not like superintending that many at once.

Senator FERNALD. Is it not impracticable to have so many ways?

Mr. FERGUSON. I think so.

Senator FERNALD. Would it not be so regarded by any business man?

Mr. FERGUSON. No; I think many business men would undertake it. I do not think you would get any shipbuilder to undertake it; perhaps they are very timid. But getting the labor in large quantities, even assuming that you can get the labor housed, is a large proposition. But if you have a man who knows how to build the ships, he can build a dozen ships, as well as one, if you have enough skilled men to go around. There is no physical reason why you can not do a great many things at once. But with a force of skilled men scattered around as they would be, it is very difficult to superintend them properly, and it is a good deal of a job to walk up and down the yard. When you give a man more than a certain number of new people to look after, he can not look after all of them. A military company is made of a certain size, because the officers can look after the men. Nobody proposes to have a company of 2,000 men, because the officers could not look after them. It is very much the same in our industry.

Senator JOHNSON. Well, what do you say as to the Hog Island establishment?

Mr. FERGUSON. I hope they will work up to it eventually.

Senator JOHNSON. What do you mean by "work up to it eventually"?

Mr. FERGUSON. I mean when they have got a force broken in and have worked there for a year, or two or three years, they will get enough skilled men to work up to the plant.

Senator JOHNSON. Well, that is not very encouraging.

Mr. FERGUSON. Well, I think they will build a good many ships, but I do not think they will build as many as it is commonly reported they are going to build. The problem of building a 7,500-ton ship is, from a muscular standpoint, the problem of driving about 700,000 rivets, and if you are going to build a ship a week, that means driving 700,000 rivets a week.

Senator HARDING. Do you estimate the building of a ship by the number of rivets?

Mr. FERGUSON. Yes, sir; you can estimate it by the number of rivets better than in any other way. I get the rivet-driving report

every morning on my desk, and I can tell from that how she is getting on; because that is the hard, the arduous work. We have a good many other methods of estimating, however; we have reports every week and every month. But as a matter of fact, in building an ordinary cargo ship, the riveting is the crux of the matter.

Senator HARDING. Do you make any report to the Emergency Fleet Corporation of the number of rivets driven?

Mr. FERGUSON. No, sir.

Senator HARDING. There are no regular reports made by you of that?

Mr. FERGUSON. No; but we have these reports, and I think all the other yards have them. I know the other yards have them, and I have told them what it was about. The best rivet-driving record is about 250,000 or 300,000 a week.

Senator JONES. About how many?

Mr. FERGUSON. About 250,000 or 300,000 a week; that is in the Union Iron Works, with a total working force of about 9,600 men. And perhaps somebody is going to start a place and drive two or three times that many in a day, but I do not think so. I think they will build a great many ships, but I think nothing is going to be gained by saying that you will do something that people of judgment know can not probably be done.

Now, officially this has not been published, but the newspapers have been full of statements about 5,000,000 or 8,000,000 tons of ships that we are going to get by a certain time; and it is vital that you gentlemen and the people of the United States should know, not what somebody says you are going to get but what you are actually going to get, using the soundest judgment that can be obtained.

The best estimate that I have seen was made by the agent of Lloyds in the United States, an Englishman, and he sat down and worked it out carefully and said they would make about two and one-half million tons; and I think that was a very good estimate.

Senator JONES. Do you mean for the next year?

Mr. FERGUSON. Yes; for the next year. Last year we built about 1,000,000 gross tons, which would be about 1,600,000 deadweight tons.

I do not know how confidential this hearing is. We will probably get 3.000,000 tons this year, and we may get 4,000,000 tons if our labor situation gets along faster.

And in that connection I will say that the Shipping Board is doing very good work down at our place. We have 75 or 100 mechanics there, who are put through a normal course of training, teaching them to teach, so that these new men that come may be broken in: and, fortunately, in this job of riveting that I have mentioned men may be broken in very quickly. That is the best feature of the whole situation. You can make a plain or common garden riveter out of a handy man who has muscle in three months.

Senator BANKHEAD. You say the Emergency Fleet Corporation has an emergency training or normal school at your place?

Mr. FERGUSON. Yes, sir; they have the best trade instructors in this country, I suppose, down there teaching those men how to teach; they know their trade, but to teach them how to teach is——

Senator BANKHEAD. Very important.

Mr. FERGUSON. Yes; very important. And they have graduated one class of 75, and they have 75 or 100 there now. And we all have

directors of training. For instance, the Hog Island corporation had, I suppose, 15 or 20 men down there—very bright, alert, and excellent men.

The CHAIRMAN. You think that is a good plan of training, do you?

Mr. FERGUSON. Oh, undoubtedly. I would like to see it go even further, and see the Government itself start in to the training of these men, like they train their soldiers.

The CHAIRMAN. What would you say about the training of men to man these ships?

Mr. FERGUSON. I think that is something that ought to go along with this. And that is something that is being done in our town. Prof. Stearns is running a night school there, and it is being done in a number of places along the coast, for seamen and navigators, to teach them navigation so that they can pass the examination to get higher positions. It is being done just as rapidly as possible. The Navy is breaking in thousands of men in the ships. And we are all serving an apprenticeship—and, of course, that is the only way we can get the large number of men required.

I think at a school we should put 10,000 men breaking in for the Government. All appreciate that we are serving our apprenticeship, and we have got to break in new men to fight—not only soldiers and sailors, but shipbuilders and every other class of worker.

The CHAIRMAN. Part of the training of sailors would have to be on shipboard, would it not?

Mr. FERGUSON. Oh, certainly; a man has got to go to sea. Well, they have pretty good opportunities now.

Senator CALDER. Mr. Ferguson, what is your idea about the Naval manning of these merchant ships and handling of them? There has been some talk about that.

Mr. FERGUSON. Well, I have not any very definite idea about that, sir. I am inclined to feel that, if everybody will do as nearly what he has been used to doing as possible we will get further.

Senator CALDER. Do you think the captains of the vessels can handle them?

Mr. FERGUSON. I think so. The Navy may make the ships safer, and the Navy has gun crews on now. But I do not look upon it as being a matter of vital importance whether the captain of the ship has an altercation with the officer on board. I think that the Navy has got enough to do running its battleships and destroyers, and perhaps the seagoing merchant people might run the seagoing end of it. The English have done that, and they have lost a lot of ships. As I understand it, the officers and the crews do not always pay attention to the orders they receive as to the various things they should do. But it seems to me that the result might be reached by a process of education and moral suasion, and it probably is not necessary to take them all off and put the Navy in entire charge.

There is one disadvantage of a Navy crew, and a right serious one. At Newport News we have finished a ship, and we received orders to equip her for a Navy crew. And I know we had equipped her already for her armed crew of 20 men. And I said: "She is already equipped for her crew." But the naval officer said to us: "We have got to have 12 additional men in the crew when she is taken over by the Navy."

Well, as scarce as they are, it seems to me that possibly we ought not to increase the number of men required, instead of decreasing them. I think that is the most serious disadvantage.

I would not criticize the Navy Department for a minute, but the men who operate merchant ships and who carry merchant crews, under the present laws and regulations, I believe capable of doing it successfully. I think there is not much complaint out of our port. Perhaps the Navy has the men to man all of these ships, but it seems to me that if they do it they will have some difficulty in providing men for this great fleet of destroyers.

Senator FERNALD. To go back to the question of wooden ships, I understand that you approve of the plan of building wooden ships?

Mr. FERGUSON. Yes, sir; I approve of it.

Senator FERNALD. Up to a certain size?

Mr. FERGUSON. Yes, sir.

Senator FERNALD. And you think that size should be about 200 feet?

Mr. FERGUSON. I think so; that is, I have been told so. I do not know much about it.

Senator CALDER. Are we going to get enough labor to meet the requirements of shipbuilding?

Mr. FERGUSON. Yes, sir; I think so. We will get it as soon as we make up our minds that we are not going to do a great many things that are being done now. That is the only way to get it now that I know of without robbing the farmers and robbing the essential industries—to get labor out of the nonessential industries.

Senator CALDER. What do you think of conscripting labor?

Mr. FERGUSON. I would not conscript labor. I certainly would not think of conscripting labor—say, shipbuilders, for instance—unless I had a scheme for universal service. I certainly would not single out labor in that industry. But if we had a system whereby every man from 18 to 65 years old was subject to the call of the Government, of course that would be a great big thing, and, of course, I would be glad to get in it. But not to single out one trade or a single set of men; they would not stand for it. If you and I and all the rest of us are willing to shoulder our burdens, that is all right, and you will find the laboring man with you on that.

Senator CALDER. You think it would cause a great deal of trouble if we attempted to do it?

Mr. FERGUSON. Yes, sir; I think it would cause much trouble.

Senator CALDER. You mean to take everybody?

Mr. FERGUSON. Yes, sir; I think so.

Senator BANKHEAD. You said a moment ago that you had had a great many men conscripted?

Mr. FERGUSON. Yes, sir.

Senator BANKHEAD. They have been returned to you?

Mr. FERGUSON. Yes, sir; they are being returned.

Senator BANKHEAD. Now, those conscripted soldiers come back and they volunteer to work for you. Do you pay them wages?

Mr. FERGUSON. Yes, sir.

Senator BANKHEAD. The same wages as you pay your other employees?

Mr. FERGUSON. Absolutely. We agreed that we would take them back at wages as good as or better than they got before they were

drafted, and that we would employ them at the same wages as the others get. And we pay them, and they are off the Government pay rolls.

Senator BANKHEAD. I suggested here in the committee the other day that perhaps we might get rid of some of our difficulties about labor if we would go out into those cantonments and ascertain what men they had that were carpenters or, perhaps, shipbuilders and that sort of thing and make the same arrangement with those men that you have made with those people who have gone to work for you. What would be the objection to that? For instance, suppose you should go over to Camp Meade and you should find in the camp perhaps a thousand men who, if not experienced shipbuilders, would have a good knowledge of carpenter work, bridge building, and so on; if they were willing to go under the conditions under which you got those other men and get the wages that you pay your men, would you see any objection to that?

Mr. FERGUSON. No, sir.

Senator BANKHEAD. Do you not think you might get quite a lot of labor in that way?

Mr. FERGUSON. We could get all that we wanted; we could get a drove of them.

Senator BANKHEAD. That is what I think.

Senator MARTIN. It is a question of housing, then; it is not a question of getting the men.

Mr. FERGUSON. No; but the difficulty is that you get those men and you know nothing about their qualifications until you have tried them.

Senator BANKHEAD. Well, you could ascertain from their record what their former occupations were, could you not?

Mr. FERGUSON. We could not tell anything about their shipbuilding abilities.

Senator BANKHEAD. I do not mean that you would get experienced shipbuilders.

Mr. FERGUSON. No.

Senator BANKHEAD. But I mean that you go out into Utah, to the farms, or anywhere, and you do not get experienced shipbuilders?

Mr. FERGUSON. No, sir.

Senator BANKHEAD. That is the kind of men I am talking about; a great many of them are good carpenters.

Mr. FERGUSON. If they were given up by the Army altogether, or furloughed from their duty, we would be glad to get them that way; we would not want them as soldiers.

Senator BANKHEAD. I do not mean that way; I mean you could get them under the same terms as the men that you now have.

Mr. FERGUSON. Yes, sir.

Senator FERNALD. You would want to know first that they would stay, would you not?

Mr. FERGUSON. Well, we would prefer that; but if they did not stay they would be no more loss to us than hiring an ordinary man and having him go. I have hundreds of requests from men who are in the Army to come into the shipbuilding business—hundreds of them. And of all our men—3,300 of them of draft age—I do not think any of them have asked to go into the Army who are building ships.

The CHAIRMAN. Suppose you were in charge of the Emergency Fleet Corporation, and it had been decided by the corporation to establish a shipbuilding plant to build ships for the Government, and you laid out a plant, say, at Hog Island, is there any reason why you could not go on and employ yourself the superintendents, the directing forces, the managers, the heads of the various bureaus and departments, and build those ships yourselves instead of letting contracts to somebody else to do it?

Mr. FERGUSON. Well, if I was going to do that, I would quit being general manager and go up there and do it.

The CHAIRMAN. Well, you could do that, could you not?

Mr. FERGUSON. Well, yes; if I gave up the job and went there and ran it. I think jobs like that must be run by men who are on the job and on hand all the time. I think the employment of other people of known capacity to operate plants like that is a very wise thing to do. We would do it if we were doing the work.

For instance, we want extensions of our plants, and we are making those right now. We would prefer under normal conditions to make those extensions with our own men—do all of the piling and steelwork and build the trestles, and all that sort of thing—but at the present time we are too busy building ships, just as the fleet corporation are too busy running their job as a whole to branch out and do this extra work.

So we go out to Stewart & Co. or White & Co. and say, "We want you to extend our plant for us, notwithstanding the fact that we can do it. But if we did that we could not build ships." That is exactly why I can not see why the Government should not build all of these houses for us and let us build ships. It takes time to build a house.

And I think that the problem of building these yards and then subletting the management, as it were, to perfectly reliable corporations is entirely sound. It simply introduces into the management reliable people with some guaranty of their competence. The good men are nearly all employed right now.

Senator BANKHEAD. I understood you to say that the only serious trouble you have, and that which is going to cause the greatest delay in shipbuilding, is the lack of housing for your men?

Mr. FERGUSON. Yes, sir.

Senator BANKHEAD. You regard that as the most important thing, do you?

Mr. FERGUSON. In our case it is the most important.

Senator BANKHEAD. Would the same thing apply to all shipbuilders?

Mr. FERGUSON. It applies to this coast generally, and specifically to every place I know of on this coast among the large yards, with the possible exception of the Bethlehem plant at Fall River.

Senator BANKHEAD. Then, of course, it follows that if that is not done by the Government it will produce a very great delay in the building of ships?

Mr. FERGUSON. Oh, yes.

Senator CALDER. This is really a vital matter.

Mr. FERGUSON. Oh, the Government can not do anything else; it has simply got to do it, if it is going to build the ships. There is no choice about building the houses at all; I mean the houses have got to be built to get the men to build the ships.

Senator BANKHEAD. Without men you can not get ships?

Mr. FERGUSON. That is correct.

Senator BANKHEAD. And without houses you can not get the men?

Mr. FERGUSON. Certainly. There is no question about the housing situation; it has to be done. But nobody believes for a minute that we are going to neglect and fail to furnish supplies for our soldiers abroad for the lack of housing for shipbuilders.

The number required is very great; three years ago in our community 500 houses were built, which is about 8 per cent of our total housing. Last year 500 houses were built, which was about the same percentage. This year only about 250 houses have been built, of which our company has built about 60.

Senator CALDER. Why was there that falling off in the number built?

Mr. FERGUSON. The prices were going up. A man can not build a house now for——

Senator CALDER (interposing). It costs 50 per cent more?

Mr. FERGUSON. Yes; as an investment it costs 50 or 60 per cent more. So, in the ordinary course, it would be insufficient anyway; our town has doubled in population in a year and the housing has not kept pace with the population. It is just as necessary for the Government to build houses for the men who are to build the ships as it is necessary for the Government to build houses for the soldiers. If the men are of the soldier class then the men have got to have houses, and the housing problem, I think, is the most important thing that confronts this shipbuilding program. That is my judgment. Of course, we have the labor troubles, too, but the labor troubles are in fair process of adjustment.

Senator MARTIN. As I understand it, your company during this war has been willing to respond to any request the Government made of you—as much so as if the Government owned the yard?

Mr. FERGUSON. Absolutely. The Government has gotten the same service from us that they have from their own yards. They have told us what to do in every case, and we have never had the slightest difficulty with them, or threats of being taken over. And our prices are regulated.

Senator MARTIN. Whatever they said to do you did it, and at their own prices?

Mr. FERGUSON. Absolutely. We did the work without getting any prices at all, frequently; and we take what they think is right and fair, and there is no question about it.

Senator JONES. You said a moment ago that if the Government would build the houses you would furnish the land?

Mr. FERGUSON. Yes, sir.

Senator JONES. What did you mean by that?

Mr. FERGUSON. I mean that we would buy the land. We would supervise the building of these houses; we would sublet, if the Government wants us to, the contracts for building these houses; we would then sell these houses to our men, if they want them—or rent the houses to them—we would sell them under the terms agreed upon with the Government. We distinctly do not want to make any money out of the housing of our men. We have an option on 200 acres of land, splendidly situated, and very suitable, right over on the James River, just above Newport News.

Senator MARTIN. Well, that is 2 miles from your yard, is it not?

Mr. FERGUSON. Yes, sir; they intend to build a street car line right to it.

Senator MARTIN. Well, would not the congestion be great at certain times in the day?

Mr. FERGUSON. Well, the street car company runs an extraordinary number of cars morning and evening.

The CHAIRMAN. They would have to have double tracks, would they not?

Mr. FERGUSON. There would be cut-outs. Our 8,000 men come to work at the same time in the morning. But that situation has been met by the street car company there.

Senator MARTIN. Are you sure that the situation can be met by the street car company if the men are located 2 miles from the yard?

Mr. FERGUSON. Yes, sir.

Senator BANKHEAD. You could very easily arrange to have one shift or crew come on at 8 o'clock, and another at half-past 8, could you not?

Mr. FERGUSON. We could; it is not entirely impracticable. I think we could in reality, just as well as we could stop one gang at 5 o'clock and another at 6.

Senator BANKHEAD. That is what I mean; you could meet the congestion in that way.

Mr. FERGUSON. It would be unusual, but not impossible.

Senator BANKHEAD. Yes. You know you have to do a good many things you would prefer not to do under the present emergency.

Mr. FERGUSON. Yes, sir.

Senator HARDING. Suppose you were given a housing contract on the 9th day of January; when could you have the houses ready for occupancy?

Mr. FERGUSON. We have counted on having our own town of 500 houses in six months. We start to get those houses ready for occupancy probably in two or three months, a few of them.

The CHAIRMAN. What size houses are they?

Mr. FERGUSON. These will be four, five, and six-room houses. We have built five or six types of houses for different families and sold them to our men. We have developed a type of house that seems to be very popular with their wives—and that is the main thing in building houses.

Senator CALDER. Do you build some of those houses for one family and some for two families?

Mr. FERGUSON. No; we make them all single houses. I think we would probably build some double houses on this property and also build some brick houses and stores, and also, possibly, put up a schoolhouse and make this into a real town. Of course the cost of the work—the streets and the gutters and the sewage disposal, and all that sort of thing—would have to go against the cost of the property, but we were going to see if we could not make a real workingman's town.

Senator CALDER. Your idea is that you shall buy the land?

Mr. FERGUSON. Yes, sir.

Senator CALDER. And the Government will loan the money to build the houses?

Mr. FERGUSON. Yes, sir.

Senator CALDER. And the houses shall be sold to the people who desire to purchase them?

Mr. FERGUSON. Yes, sir.

Senator CALDER. The Government taking up a first mortgage for its interest?

Mr. FERGUSON. Yes, sir.

Senator CALDER. And you taking a second mortgage for the value of the land?

Mr. FERGUSON. Yes, sir.

Senator CALDER. And that the purchaser of the house shall then have a certain number of years—10 or 15 years, dependent on the contract—to pay back the installments of the money by the Government and by your company for the house and the land?

Mr. FERGUSON. That is the idea exactly. And in case the man does not want to buy the house, but simply wants to rent it, that the rental shall be based on the cost of the house, and that it shall be satisfactory to the Government.

Senator HARDING. What is the estimated expenditure under your plan?

Mr. FERGUSON. We would want in the neighborhood of $2,000,000. The 500 houses—we estimated that the total cost of that development would be in the neighborhood of $1,500,000.

Senator JONES. And that would furnish accommodation for how many?

Mr. FERGUSON. That would furnish houses for 500 men, and would furnish accommodations, I should say, for about 1,200 men. I think they usually figure about 2½ or 3 men to a house.

Senator CALDER. And they would each take a roomer, perhaps?

Mr. FERGUSON. Yes. Of course, that would not meet the entire situation; but there is a certain amount of local building going on, and if the Army helps out we will get enough men, we think.

Senator CALDER. What assurance would there be that only those men employed in the shipyards would live in those houses?

Mr. FERGUSON. We would contract to do that; we would contract, as agents for the Government, to see that nobody lived in them except our employees. We recently bought 90 houses and put everybody out except our employees; our employees occupied most of them, but we simply had to put everybody else out.

Senator HARDING. You could not very well control that in case they sold the houses?

Mr. FERGUSON. No; we could not control that if they sold the houses. There is one thing that could be done in our community immediately that would help things a great deal. There are a lot of small cottages scattered around which are empty. There are several hundred of them that are lived in only three or four months in the year. It seems to me that if a way could be devised whereby they could be utilized it would be a very good thing.

Senator MARTIN. Are they not too far away from the yard?

Mr. FERGUSON. Well, they could be utilized for the officers; perhaps they are too far away for the men; they are over at Ocean View.

Senator MARTIN. If they were conveniently located there would not be any difficulty about the Government taking charge of them.

Mr. FERGUSON. Well, they could not be used very well by the workingmen, who have to get to the gates by 7 o'clock in the morning; but they could be used by the officers; and I think we ought to use anything that can be used. And I am perfectly willing to move my family out of our house and take care of some of the officers. We would not have any trouble in moving if the Germans were there.

But if we are going to have a military camp, let us have one; move out all people who are not really usable; and I would not hesitate for a minute in using the power to commandeer in order to do the things that the United States thinks are vital. You gentlemen have provided that our plant can be commandeered, and that we can be made to do anything you say, and I do not see why the people who have property that they are not using excepting for three months in the year should not also have their property commandeered.

Senator MARTIN. There is no doubt about the propriety of that or the wisdom of it if the property is suitable.

Mr. FERGUSON. Well, I do not know that it would be. But my idea was to take that until the other houses are finished. But our position is immediate and pressing; and the summer hotels there could be taken immediately and used.

Senator MARTIN. Well, they are not near enough for those purposes, are they?

Mr. FERGUSON. Yes; at Buckroe Beach.

Senator MARTIN. If they are near enough to suit your purposes, they ought to be taken. It would only take two or three days for Congress to pass a law, if one is needed. There would be no trouble about getting authority to take whatever the Government needs.

Mr. FERGUSON. Well, I think in an emergency condition like this—of course, a great deal of judgment has to be used—that the Government ought to take anything. But that right must be exercised through some high authority, you understand; you can not turn it over to everybody. But there are many vacant houses—not in Newport News; there is not one vacant house in Newport News—but there are many vacant houses that could be used to tide us over this tremendous jam.

Senator MARTIN. Five miles is a very great distance for the men to have to travel.

Mr. FERGUSON. Yes. And these are better houses than the workingmen would need to live in; but they would make splendid locations for some of the officers, I think. It would be better than to create a town up there. I believe that if we can not get relief, the best thing we can do immediately is to build apartments to house the men close to the works.

Senator MARTIN. If you had accommodations for 5,000 additional men, it would hasten your construction very much, would it not?

Mr. FERGUSON. Oh, yes; we can not do anything more than we are now doing without housing. We could now hire 2,000 or 3,000 more men now if we had the houses to put them in; and six months from to-day we can work 5,000 or 6,000 more men than we have now; perhaps we could get twice as many as we now have. We talk about working a double shift. We have not enough men for one shift.

Senator FERNALD. That same condition exists at every shipyard on this coast, does it not?

Mr. FERGUSON. That same condition exists at every shipyard on this coast, with the exception of the Fore River plant, at Quincy, Mass.; that is where they have very little munition making, or war activities in that neighborhood. And this housing problem is the most vital point connected with our whole program, in my judgment. It is much more important than building cantonments; soldiers have got along before now by living in tents.

The CHAIRMAN. Right there, Mr. Ferguson, I notice that you say that the conditions are the same along the whole Atlantic coast. I have not heard of any trouble of that sort at Savannah, Ga.; or Brunswick, Ga., or Jacksonville, Fla.

Mr. FURGUSON. Well, I specified a moment ago, that I meant in the leading shipbuilding plants.

The CHAIRMAN. Yes; I see.

Mr. FERGUSON. I understand from Mr. Britton, who is building ships at Savannah, Ga., that their housing situation is all right. It was considered better to scatter the shipyards as widely as possible, so as to avoid creating that congestion too much in one locality.

Senator MARTIN. If the Government should come to your aid in the matter of housing, it would be more properly done through the Navy Department than through the Shipping Board, would it not?

Mr. FERGUSON. No, sir; it would be more properly done through the Shipping Board, as a matter of fairness.

Senator MARTIN. Are you doing much work for the Shipping Board?

Mr. FERGUSON. Yes; and we expect to do a good deal more. The Navy Department is putting up the money for the plant. The Navy Department, however, has told the Shipping Board that our new battleship ways may be used for the building of merchant ships. The Shipping Board, then, has the use of two new ways, which will accommodate two merchant ships each. And the Navy Department feels, as it is furnishing the plant, the Shipping Board ought to help out with the houses, and the Shipping Board apparently has authority to do that which is more extensive than the authority of the Secretary of the Navy. The Secretary of the Navy has put up $100,000, with which we are having constructed a temporary wooden hotel, which we are just starting now.

But the Shipping Board expects to get our facilities, and, of course, we would like them——

Senator MARTIN (interposing). What put me in mind of the Navy Department was because it was an old and well-established department, and I thought they would probably organize it more quickly.

Now, I am speaking as a layman; but I have an opinion that it ought not to take three days to consummate arrangements for all the housing that you need at Newport News. There is plenty of material available; and there is no more reason why it can not be done in three months than in three years; and the question in my mind is where you ought to go to get it done quickly.

The President has over $80,000,000 to use for any purpose in connection with the war that he sees fit; and there are other large appropriations available; and if they are not available, they will be made available in 48 hours. I know that the Senators around this board will agree to this statement, that Congress will appropriate

money for the building of houses at shipyards within 48 hours if necessary, and I can not, for the life of me, see why you can not get all the housing you need for Newport News; and it ought to be done in three days, certainly.

Mr. FERGUSON. Well, I will certainly be glad to get it, because I have been coming to Washington now for nine months; and the fact that we saw the necessity for houses is shown by the fact that we started in to build houses for our men seven or eight months ago.

Senator MARTIN. Well, with all of the data that you have accumulated, I can not, for the life of me, see why it can not be done in three days, as well as in three years—and if I am making too strong a statement, I hope to be corrected.

Senator HARDING. How long have you been asking the Shipping Board for money for housing?

Mr. FERGUSON. Well, we talked it over for months, and we started asking for it four months ago.

Senator JOHNSON. I did not quite get that answer.

Mr. FERGUSON. I say we talked of housing, or suggested the necessity of building houses, about four months ago.

Senator JOHNSON. Whom did you ask?

Mr. FERGUSON. We wrote to the Emergency Fleet Corporation about it, and we reported it to the Navy Department, and we reported it—not officially, but verbally—to the War Department.

Senator MARTIN. You have submitted this scheme for the building of those houses to somebody, have you not?

Mr. FERGUSON. Yes; we talked about it until I was tired of it; and we investigated, and had agents of the Council of National Defense, and everybody in Washington, pretty nearly, down looking it over, and sending plans and estimates, and talking, and switching around from one to the other, until now, finally, it is pretty well landed. The Council of National Defense has a housing committee consisting of one man; a very good committee; Mr. Eidletz, the committee; he is the man in charge of housing, and he is getting this information together and has been doing so for some time. Of course, the trouble with the proposition was lack of funds, or lack of appropriations, or something of the kind.

Senator HARDING. Would you mind stating specifically whom you talked with on the Emergency Fleet Corporation?

Mr. FERGUSON. I talked with Gen. Goethals, with Admiral Capps, Admiral Bowles, and everybody around the place.

Senator CALDER. Did you talk with Chairman Hurley?

Mr. FERGUSON. Yes, recently.

Senator CALDER. Did you talk with Mr. Denman?

Mr. FERGUSON. No; I have not talked with Mr. Denman about it; I talked to Mr. White.

Senator HARDING. What was the explanation given you for taking no action?

Mr. FERGUSON. Simply that the Government has not yet got a policy as to how they are going to do this. We were told in the beginning that these houses could be built; that they would lend us the money to build them if we would give them a first mortgage on the houses, and also give them a mortgage on the plant to make the loan good.

Well, we could then borrow money like that without going to the Government; we could then borrow money like that on our note.

Then the next proposition was that we were to put up 40 per cent of the money and they would put up 60 per cent, or that we would put up 25 per cent and they 75 per cent, and we would take a second mortgage and they would take a first mortgage.

In other words, so far as the mortgage is concerned, it has been more or less of a trading proposition. And we do not consider that it is particularly our affair, because we are only the agents of the Government, and we have not the money to put into this thing if we wanted to, because our money is completely tied up in the plant.

Now, this is just a matter of discussion. It was intended to build the houses all along. It has been talked of all along, but we have not got to the point.

Senator HARDING. You have got no houses?

Mr. FERGUSON. No houses. Now, Mr. Eidlitz is evidently doing very well. We have drainage engineers, and landscape engineers, and architects, and civil engineers in town going over the matter with them, and they have a scheme which I think should go ahead. I do not know that it is a perfect scheme.

Senator CALDER. Mr. Eidlitz has been over the ground with you, has he?

Mr. FERGUSON. Yes, sir; he has been over it with me, and he has people down there going over the ground; and we have employed a lot of high-grade engineers, and we will pay them if we build these houses; but we have never got to the point where somebody says, "Here is the check," or "Here is the money."

The CHAIRMAN. Or the contract.

Mr. FERGUSON. Yes, sir; or "Or the contract." We do not want to do this work, but we want it done, and so far we have just talked about it.

Senator JONES. When could you start to build the houses if the authority was given?

Mr. FERGUSON. To-morrow.

Senator CALDER. You have offered to contribute the land and take nothing from the Government?

Mr. FERGUSON. Yes, sir; we would contribute the land if they wanted us to. We do not expect much, anyhow. But we will put in the land and we will put in our own services. I think that is a fair proposition.

And yet I am told that we want too much. We do not want to make any money out of it, but, on the other hand, we do not want to bankrupt our company by building a lot of houses that we can not use. I do not think it is our function to go into real-estate speculation. The Government is the only real-estate speculator now.

The reason we can not do this is because we do not know when this war is going to end. If this war is going to last three years we will be glad to build those houses. If, on the other hand, the war does not last but a year we could not build them.

Now, if the Government gets a first lien on the land it has got just what it deserves.

Senator CALDER. In your judgment the Government will probably get back every dollar that it puts into the thing?

Mr. FERGUSON. Yes, sir; in my judgment.

Senator CALDER. That is mine, too.

Senator MARTIN. If they do not get back every cent they put in, it is a war emergency; they want this thing done and done promptly.

Mr. FERGUSON. Yes; it is a war expense, and I believe the Government should stand the war expense, whatever it is.

Senator JOHNSON. Do you remember, Mr. Ferguson, last July Mr. White coming to you and asking you about employment by the Shipping Board?

Mr. FERGUSON. About my employment?

Senator JOHNSON. Yes.

Mr. FERGUSON. As assistant to Gen. Goethals?

Senator JOHNSON. Yes.

Mr. FERGUSON. Yes.

Senator JOHNSON. Did you come down here with him at that time, do you remember?

Mr. FERGUSON. No; but Mr. White spoke to me; yes. He did not offer me a position, but he spoke to me about my coming here, and said he would like me to come.

Senator JOHNSON. When was that?

Mr. FERGUSON. Some time in the summer.

Senator JOHNSON. Along in July?

Mr. FERGUSON. I think it was about that time.

Senator JOHNSON. Do you recall what it was he suggested to you?

Mr. FERGUSON. Not a definite offer. He simply stated that he would like to see me come here, and was very nice about it. He was down at our plant.

Senator JOHNSON. Did you go up there?

Mr. FERGUSON. Yes; I went up to the Shipping Board.

Senator JOHNSON. Whom did you see there?

Mr. FERGUSON. I saw Mr. White and Mr. Donald and Mr. Denman, and just talked to them.

Senator JOHNSON. Did you talk to them about going on the Shipping Board?

Mr. FERGUSON. No; not definitely. He had no definite proposition.

Senator FERNALD. You have taken it up with the Secretary of the Navy, have you not?

Mr. FERGUSON. Yes, sir.

Senator FERNALD. Have you taken it up with the Secretary of War?

Mr. FERGUSON. Oh, yes; and he is having it investigated; he has got an officer working on this now.

Senator FERNALD. Have you talked the matter over with the Shipping Board?

Mr. FERGUSON. Yes, sir.

Senator FERNALD. But now whatever activities are being made down there are being made under the direction of the Shipping Board, are they not—the gentleman you speak of?

Mr. FERGUSON. The Council of National Defense and the Shipping Board and the War Department.

Senator FERNALD. As it is, you would go to one and then the other?

Mr. FERGUSON. What happens is, Senator, that it puts the citizen in rather a ridiculous position of trying to coordinate the Government.

Senator FERNALD. That is what I thought.

Mr. FERGUSON. When you have to go to so many people about the same thing.

Senator FERNALD. That is exactly what I wanted to bring out.

Mr. FERGUSON. The housing is a national question. It does not make the slightest difference what man builds the houses, builds the ship, or rows a boat, as long as he is the man needed in the military service, and when it is split up so much, it makes it rather hard to get at it. I will say, the Secretary of the Navy gave us $100,000 to build housing with. He did that; that is all we have gotten.

Senator CALDER. Where did you build the house?

Mr. FERGUSON. We built a hotel, dining room and kitchen, that will hold about 300 men, each one with an individual room, a very decent place, heated and lighted, and all that.

Senator CALDER. Does the department own that building?

Mr. FERGUSON. Yes, sir.

Senator CALDER. And they collect the rent, or how is it done?

Mr. FERGUSON. No; that is done to provide the men who build these destroyers on these later contracts we have. We expect to run the building for them and run it at cost, and then after the war is over, the Government will have the building. We will buy it from them, or they can sell it to anybody else, or do whatever they want to with it.

Senator CALDER. You charge the men so much a week for the rooms?

Mr. FERGUSON. We charge the men so much a week or day for it and have somebody to run it. It is virtually a cantonment section.

Senator MARTIN. How many men will it accommodate?

Mr. FERGUSON. About 300.

Senator MARTIN. Did the Secretary of the Navy hesitate to appropriate that money?

Mr. FERGUSON. Not five minutes.

Senator MARTIN. Did he take it out of his regular appropriation?

Mr. FERGUSON. Yes, sir.

Senator MARTIN. What difference in principle would be involved in the Emergency Fleet Corporation taking it out of their appropriation?

Mr. FERGUSON. The difference in principle with us would be that we have no contracts with the Emergency Fleet Corporation, except for commandeered ships.

Senator MARTIN. The question of money does not enter into it. Every officer of this Government knows that whenever they say money is necessary for war purposes there has never been any delay, and will not be any delay. And so far as money is concerned, I undertake to say that they can find the means if they want to do it. If they have not got any money, they can go ahead and make arrangements and rely on Congress, and Congress will appropriate money, whatever is necessary, within 48 hours after representation of these facts.

The CHAIRMAN. How many commandeered ships have you?

Mr. FERGUSON. Six.

The CHAIRMAN. You are still at work on six?

Mr. FERGUSON. Yes, sir.

Senator CALDER. When will they all be completed?

Mr. FERGUSON. The last one the last of this year. One is completed to-day; I sign the bill of sale to-morrow; another one next week; another one in May; another one in August; another one in November; and another one the 1st of January; that is our schedule; that is liable to change; but that is within our contract time. Of course, if we do not get any houses, we shall not build any more merchant ships. We are not obligated to use our entire force on these destroyers, but we can not build any more merchant ships with the force we have got now. The destroyers, it just happens, take about 5,500 men to build, and if we can get four, or five, or six thousand men, those additional men can be put on merchant ships—I do not mean those additional men, but that proportion of our men will immediately go on merchant ships.

Senator CALDER. You have given us a lot of valuable information, and, for one, I appreciate your testimony. Have you any suggestion to make, in your judgment, to advance the building of merchant ships?

Mr. FERGUSON. I do not know of anything more important than the housing situation. I think that the labor policy of the Government is a very vital matter. I think it is very desirable that the Government have, in order to get the men who work for it and the men who work for its agents, a definite policy in regard to labor, as it can have. I think the housing is very important. I think in the shipbuilding business the breaking in of new men is an important thing.

Senator MARTIN. When are you contemplating leaving the city?

Mr. FERGUSON. I was going away to-night, sir; but I can stay over if it is necessary.

Senator MARTIN. I think it is very desirable for you to stay over until at least to-morrow, until you can see what can be done and ascertain if this committee can not devise some way to facilitate this housing situation. I think myself, sir, that with respect to the deal prepared by the Shipping Board, if we are going to wait until the war is over, we will not need any ships or houses. What we are going to do ought to be done instantly.

Mr. FERGUSON. Many of our laboring class are of the best. You can not handle labor unless it is properly housed; and I, for one, do not like the job. On the other hand, it is my business to run that job and make it go, if the men in the living accommodations live like they should live. We employ high-grade men, and they are decent, respectable men, and it is not fair or right to herd them together under conditions that are entirely unnecessary and which they can not and will not stand; and I think that housing is at the bottom of the most of our difficulties, with the immense floating population, men continually searching for quarters, men moving their families in and out of towns, their children not living under decent conditions. I know of conditions in Newport News where 18 people lived in one room, and in another room a man, his wife, and three children, and two of the children had diphtheria. Imagine such a

thing! We talk about uplift and training-camp activities and democracy, and they create a condition like that. I am not much of a settlement worker and that sort of thing, but when the Government goes ahead and creates a condition where men can not live decently, an unnecessary condition, I think it is right bad; and, if nobody is responsible for it, it is worse.

Senator MARTIN. We are all responsible; each citizen has his own part in it; and I think we must take hold of this housing business.

Mr. FERGUSON. So far as I am concerned, then, I will feel that it is the best piece of work I have done, because that is the one thing we people have simply got to have; and if the Government looks upon it as being its proper function, I think it will be a splendid thing and help more than anything in the shipbuilding program.

I think we might have a school for mechanics, but that is more of a technical matter in which you gentlemen are not interested.

The CHAIRMAN. There is another gentleman present, and he can give us some further light on that subject. I think that is what the committee desires, and we are very much obliged to you, Mr. Ferguson.

STATEMENT OF MR. GEORGE M. ANDREWS, GENERAL MANAGER NEW YORK SHIPBUILDING CORPORATION, CAMDEN, N. J.

The CHAIRMAN. Mr. Andrews, state your full name and place of residence.

Mr. ANDREWS. George M. Andrews, Camden, N. J.

The CHAIRMAN. What is your business?

Mr. ANDREWS. General manager of the New York Shipbuilding Corporation.

The CHAIRMAN. How long have you been engaged in that business?

Mr. ANDREWS. I do not like to tell this—35 years.

The CHAIRMAN. What are you engaged in now?

Mr. ANDREWS. I have been with this company 17 years; that is, since it started.

The CHAIRMAN. What is the extent of their operations now?

Mr. ANDREWS. We have 19 ships now for the Emergency Fleet; 33 destroyers; a battleship of the same size as the one at Newport News, the *Idaho;* we have contracts for a battle cruiser and two battleships that are laid aside. We started work on them and have stopped.

The CHAIRMAN. All steel ships?

Mr. ANDREWS. Oh, yes.

The CHAIRMAN. Then, how many men have you employed?

Mr. ANDREWS. About 6,800 on our rolls.

The CHAIRMAN. Mr. Andrews, do you know something about this housing matter that you have been hearing discussed this afternoon? Will you tell the committee your views about that situation and the necessities?

Mr. ANDREWS. Our conditions are very much the same as at Newport News, as it has been described, except that we have not cantonments all around us. We have shipyards all around us, and they are pretty thick.

Our transportation is just as much a problem with us as the housing, because if we have the houses, unless they are built within walking distance of the shipyard, the men could not get there. We are losing men right now, although we have had the railroads. We have the West Jersey & Sea Shore, which runs right back of our office. They have put on additional electric trains for our accommodation. But, unfortunately, those trains have to run on the road and they do not go where the men want to live. We are bringing men from a radius of 8 miles around our yards. We have a ferryboat service from Philadelphia and three small boats. Of course, this sort of weather neither the ferryboats nor the small boats can run, there has been so much ice in the river; in fact, the men could not work the last week. We started up yesterday in full swing again. We have reached our limit. The officers of the company in New York have asked me to put on more men. I can not even try to put on more men. It is an outrage the way they are handled now.

I have a few photographs that we have taken to show the public-service corporation the conditions. There have been two shipyards built within a mile of us, and I think there are less cars now than there were in 1910 or 1913, and we have a great many more men, besides the men that are in these other two yards. We want to increase our force in the next six months at least 5,000 men. The yards below will probably try to increase theirs at least 3,000, and it is an absolute impossibility at present to do that.

The CHAIRMAN. How far are you from Philadelphia?

Mr. ANDREWS. We are right across the river; 2 miles below Market Street Ferry. We are pretty close to that old town of Gloucester, the racetrack place. It is quite a respectable town now. A great many of our people live there, but that town has about as many people living in each room there, I should think, as there are in Newport News.

The CHAIRMAN. How far are you from Hog Island?

Mr. ANDREWS. About 3 miles, I should say. They are on the other side of the river, below League Island.

The CHAIRMAN. Then you have not got the vacant land available?

Mr. ANDREWS. There is lots of it all around us. We are in the country.

The CHAIRMAN. You would have to acquire land?

Mr. ANDREWS. We have acquired some of it with a view to doing something of this kind.

The CHAIRMAN. Is the land pretty expensive there?

Mr. ANDREWS. Well, some of it is.

The CHAIRMAN. Have you got any estimate as to what it would cost to get the land and put up the buildings to accommodate your additional force?

Mr. ANDREWS. Estimates have been made of that. Mr. Neeland asked me to say to you that he would be glad to come down and take that point up at any time; in fact, he expected to be here to-day, but was sick and could not come. He has had charge of that himself. But I know that they have an option on quite a good many lots, and some, I think, they have purchased. It is a farming country, right around us, and there is a good deal of land within easy distance from the yards, which would help out the transportation

problem. Men could walk, except they do not like to walk very much nowadays. They did not use to worry about 2 miles' walk, but they will not walk much more than a half a mile at any time now. We have considered the cantonment proposition. Houses built similarly to those of Newport News, with a head house occupied by a family who would take care of the rest of them, but with us the proposition was to build a lot of operation houses, as they call them in Philadelphia. We are in the city limits, and have to put up brick or fireproof construction.

The CHAIRMAN. Yours is an old-established yard?

Mr. ANDREWS. For 17 years.

The CHAIRMAN. At that location?

Mr. ANDREWS. Yes.

The CHAIRMAN. How many ways have you?

Mr. ANDREWS. We have five in the original plant, each of which will handle two big ships. We have just completed four more that will handle big ships. They are intended, in fact, to handle ships a thousand feet long when they are completed, and we are finishing up 10 sets of ways for torpedo boats. Some of those are ready as far as the piling, and so forth, goes. The cranes are not here.

The CHAIRMAN. Are you getting on all right with the work on the contracts that you have?

Mr. ANDREWS. We are having a great deal of trouble to hold new men. There is no trouble whatever with the old force. We have men who have been there 17 years and some 13. It is pretty hard to get those men away, but a new man comes on there and leaves his family, possibly. We have provided a department that takes care of the placing of single men; in fact, we have made a careful canvass of the town and adjoining towns, and found a few rooms for single men. There does not anybody want a married man as a roomer. Of course, we would a great deal rather have the married men, because they stick better. Men come in there, and if things do not suit them the first day, we lose them. That is what causes this tremendous turnover you are reading so much about these days. They simply drop out; do not even come back for the first day's pay. They disappear and go to Hog Island or they disappear and go to the Federal yard; and, of course, in addition to that there is Cramps, which is only 2½ miles from us, and they employ rather more men than we do and want to put on a lot more.

The CHAIRMAN. Do you have any trouble about material?

Mr. ANDREWS. Yes; plenty.

The CHAIRMAN. Have there been delays on that account?

Mr. ANDREWS. Yes, sir. We contracted with the Government on the 11th of July for 60 destroyers, and 4 more on the 28th of September. We had a berth ready under our covered ways for the first destroyer on the 16th of October. We did not lay the keel until the 1st of December, because we did not have enough of that keel to lay.

We had the material ordered, practically enough for four boats on the 6th of August. On the 8th of October we had practically everything ordered. The bulkhead plates we ordered on the 17th of August, and we have not gotten them. We can not proceed with the ship until those bulkheads are completed. This bulkhead plating is still undelivered at this date. We got some Saturday and worked

all day Sunday and Sunday night and tried to make a little start on that ship. In the meantime we have two more vacant ways for those ships, and nothing has been done on those, and there will not be anything done for some little time until this material is all in and worked through the shop.

Senator HARDING. Are you speaking now of destroyers?

Mr. ANDREWS. Destroyers.

The CHAIRMAN. Those contracts with the Navy?

Mr. ANDREWS. Those are Navy contracts; yes.

The CHAIRMAN. I had reference to contracts with the Emergency Fleet Corporation.

Mr. ANDREWS. Well, we are having trouble in getting material for those ships, and, of course, some of them have been delayed. For instance, the stern frames, which in these particular ships are forgings. There is only two or three forges in the country that can make them.

The CHAIRMAN. Where do you get those from?

Mr. ANDREWS. Buffalo. I think they are two years behind on those, and the emergency fleet had about decided sometime ago to place an order for 200 more with that concern. We only had 10 all together; we are two years behind.

Senator BANKHEAD. Then they would be 200 years behind with the other? [Laughter.]

Mr. ANDREWS. I should think they would be more than that. I found that was going on, and took it up with some of the people and advised them to look that concern up a little bit. It was no trouble to them to make them; in fact, there has been no trouble in making promises to us.

Senator JOHNSON. When was it decided to place that extra order?

Mr. ANDREWS. This was just before Gen. Goethals retired; that is, the order for the so-called fabricated ships was placed. By the way, there seems to be some feeling that fabricated ships can not be built. We have been building them for 15 years. In fact, our plant was the first plant in the world that ever did that class of work, and I do not think you need fear but what these will turn out all right. Of course, instead of being fabricated in your own plant, right where the work is put together, it is the proposition to place it among a number of bridge concerns. Those people have had the benefit of all our experience, and have had our men to lay down the lines and make the templets for these ships.

Senator HARDING. For submarines?

Mr. ANDREWS. For submarines.

Senator HARDING. Since you have touched on the disgusting situation at Buffalo, do you know what has been done to correct that situation?

Mr. ANDREWS. Yes; in the case of these fabricated ships they are making a structural steel sternpost, changed the design entirely that we are building, and it is probable we will get some of these posts made of steel castings, but we are in almost as bad shape on some of those. The founders have not been able to keep up with the sudden expansion called for by this class of work. In the case of the Hog Island ships, they are all made of plate and castings combined. It is a built-up structure, so as to obviate that delay. There prob-

ably will not be any such delay on those; there is no reason why there should be.

Senator HARDING. While you have the data before you—you are contracting to build how many ships, cargo ships?

Mr. ANDREWS. We have 19 under construction at the present time.

Senator HARDING. Were many of those requisitioned ships?

Mr. ANDREWS. All of them.

Senator HARDING. All of them?

Mr. ANDREWS. Yes, sir. We have just laid aside four big ships at the request of the Shipping Board, as they wanted a different kind of ship. We signed the contract for those ships; that is, for three troop ships. We have laid aside the material, which was practically worked, ready to go into the ship, and are holding the berths for these new ships that we have just started on.

Senator BANKHEAD. Are these troop ships you speak of on the ways?

Mr. ANDREWS. Oh, no. We have just gotten the order. We have them scheduled, for two of them, to go down in June and one on the 1st of August.

Senator HARDING. How long will it take to complete them?

Mr. ANDREWS. Well, seven months to get them overboard and about four to five weeks after they are overboard, if we can get the men—probably four weeks. We are fixed so that we can put the machinery in the ship before she goes overboard, boilers and engines. We have a 100-ton crane over each slip; that is, over the slipways, so that we launch all of our ships with the machinery in them. We just launched three ships in December in about three weeks with the machinery completed.

Senator MARTIN. They were commandeered ships?

Mr. ANDREWS. Yes, sir.

Senator MARTIN. What tonnage?

Mr. ANDREWS. One was a tanker of 12,500 dead-weight tons; one was a collier of 4,900 tons dead-weight. The other was a collier of about 8,800 tons.

Senator MARTIN. And they are going into the service?

Mr. ANDREWS. No; they are all completed with the exception of testing the tanks, and the weather has been so cold that if we had a leak it would be tight, so we had to stop testing. That will take, on the tanker, about five weeks to test them. They have all been tested preliminarily on the ways up to the light load line, and they have got to have the final test before she can leave. That will take at least five weeks on that ship; the others about four weeks more in the testing.

The CHAIRMAN. You have no contracts for fabricated ships up to this time?

Mr. ANDREWS. Ours are all fabricated ships; not of the standard ships; no, sir.

The CHAIRMAN. These are all requisitioned ships that you have been building?

Mr. ANDREWS. Yes, sir.

The CHAIRMAN. Are you behind with the 19?

Mr. ANDREWS. Why, yes; we are.

The CHAIRMAN. To what extent?

Mr. ANDREWS. To the extent of eight months—that is, on some of these ships. We had a very serious strike in 1916. A good many of these contracts were taken before that time. The strike lasted eight months—that is, we did not get over it for eight months.

The CHAIRMAN. Have you had any since then?

Mr. ANDREWS. No, sir. No; we do not know what a strike is now.

The CHAIRMAN. You could speed up if you had more men; is that the idea?

Mr. ANDREWS. Yes, sir. About a year ago we were running with 3,800. We have now about 6,800, and we have reached our limit; we have gone beyond our limit really.

Senator HARDING. With respect to housing and transportation?

Mr. ANDREWS. With respect to housing and transportation. The public-service people find fault with our men for riding on the bumpers, but they have got to get home some way. The other day a car left our yard with 160 people on it, 40 of them hanging outside.

Senator JONES. How many more men could you use in your plant than you have now if you had housing and transportation facilities?

Mr. ANDREWS. As it is now?

Senator JONES. Yes, sir.

Mr. ANDREWS. We could use about 2,000 after one week of fairly decent weather. Our ways are completed and the cranes are up. We are putting in the cement barriers that we lay the ship blocks on—the launching ways. Those are in two of these new ways, and the keels laid in those two.

The CHAIRMAN. Could you get the men if you had those facilities?

Mr. ANDREWS. We can get just as good men as we expect to get. There are no more shipbuilders; in fact, they have been hired three or four times over. We have got to make every shipbuilder now, and all the new yards have got that staring them in the face—that is, in our section of the country.

The CHAIRMAN. How long does it take to "make" them?

Mr. ANDREWS. Well, some you can make a good deal quicker than others—some trades. We build our own machinery, and machinists and boilermakers are not made in a day nor a few months. They have got to serve their time, and there we have got to depend on getting men from less essential industries. In fact, we are getting work built in Milwaukee, and we are getting auxiliaries in Chattanooga, Tenn., and Davenport, Iowa—getting them from all over the country, for that matter—from Buffalo, from quite a number of western concerns where they had the men. We are getting a great deal of machinery for 20 destroyers; we are building the rest for the other 10. We are unable to get as many machinists as are necessary. Philadelphia is quite the headquarters for those people of that class, and the Westinghouse Machine Co. have just put up a big plant below Essington, or at Essignton, which is going to use about six thousand more men than they are in our district.

The CHAIRMAN. Are these street car lines or regular railroad lines that run down to your plant?

Mr. ANDREWS. We have a street car line and a railroad and the ferryboat—that is, the Gloucester ferry. She stops at our wharf coming in and takes them away again at night. [At this point Mr. Andrews exhibited photographs to the committee.] There are two

here [indicating]. These are all marked on the back. There [indicating] is the yard Saturday noon. That is one minute after the gates are opened. You see these men here? That shed is crowded, you see, with five thousand and some odd men coming out of there that day, 5,095 men leaving the plant, and seven cars were provided. Of course, all those men do not ride. There are about 2,700 who would ride if they could. That is the way they go and come.

The CHAIRMAN. How far do they walk, those that do not ride?

Mr. ANDREWS. Some of them have only a quarter of a mile, I should say. That is [indicating] at 6 o'clock, one hour after the other men have gone home, a flashlight photograph.

Senator JONES. These men have been waiting around all that time?

Mr. ANDREWS. I waited that night myself with the men, and it was over an hour before they could get on the car. Of course, there was a breakdown. They run 8 or 10 cars right by our place from this lower yard that has just been started. The public-service men had me over the other night finding fault with these poor devils for getting on that car, and the car is crowded to suffocation. It is a very bad state of affairs. These photographs were all taken on different days at different hours. That [indicating] is the crowd coming down in the morning.

Senator HARDING. I want to ask you if your solution of this pressing necessity is the provision of houses for the men?

Mr. ANDREWS. That will help; without that we can not do anything, as I see it.

Senator HARDING. What else can we do?

Mr. ANDREWS. The rest of it, I think, we have got to do. We have got to train the men. We are doing that. We have a school at our place which we have been running for some little time. There are no such things to be had as ship fitters, riveters, or any of the iron trades. Those men we have got to make from green men. Of course, their efficiency is poor for quite a while, but in two or three weeks on some classes of the riveting we can make fairly good riveters—not shell riveters; that is a little different proposition. But we have been doing that right along.

Of course, there is another thing that is very essential, that the Government has to do, and that is stop this stealing of men. No man should be permitted to leave the shipyard to go to another shipyard without the release from the yard he is working at. It is just a vicious circle; they are running from one place to another.

Senator JONES. The wages are essentially the same?

Mr. ANDREWS. They will be. At the present time the wage adjustment board is sitting in Philadelphia hearing the case of the men and also the case of the shipbuilders, and are going to arrive, or try to arrive, at a fixed rate that all shipyards must pay.

Senator HARDING. Have you had any difficulty in getting men to work full time.

Mr. ANDREWS. Well, yes. There is some reason for that. Your riveters never work full time. Our experience has been that for a good many years; they would only make about 35 hours a week. We are now paying our men—instead of a bonus for putting in 48 hours we pay the riveters a bonus of 10 per cent if they make 40 hours per week. You see, there are three men in the gang. Well, if one man is

sick that throws the others out. We tried the thing with a bigger bonus for 48 hours, and they said, "We can not earn it; make it something we can try for and have some hope of getting a bonus and we will try it." So we made it 40 hours.

Senator CALDER. How is it operated?

Mr. ANDREWS. There are a lot of them who do not get it, too many of them; but you can not expect anything different.

Senator CALDER. What do you pay a riveter an hour?

Mr. ANDREWS. They work piecework altogether.

Senator CALDER. How much do they make a day?

Mr. ANDREWS. They can make $8 easily if they try. They limit themselves to $17 for the gang in our yard; that is, the riveter, holder on, and delivery boy. The passer we pay by the day.

Senator HARDING. You mean they will not drive any more than that in a day?

Mr. ANDREWS. They say that a good man should not drive more than that; that he does not live very long if he beats that.

Senator HARDING. It is hard work?

Mr. ANDREWS. It is absolutely very hard work; there is no question about that. In the summertime the holder on is really the hardest worked, as he has the worst condition to work under. On a battleship, for instance, he is down on the bottom in the compartments, with the sun playing right on the outside of the ship, and here [illustrating] you are confined in a place that is not over 4 feet in width. They are a little better off in our yard than most, because we have sheds over the building to keep the heat off. In the wintertime the holder is lying right up against the cold iron.

Senator HARDING. He gets it going and coming?

Mr. ANDREWS. He gets it going and coming.

Senator HARDING. You pay him extra wages?

Mr. ANDREWS. No; the holder on—the riveter gets the most. That is divided 44-35, and the boy gets the rest; 44 cents on a dollar of the riveters. The riveter is the skillful man, although the holder on has to be pretty skillful.

Senator CALDER. Is yours a union yard?

Mr. ANDREWS. No, sir; open.

Senator CALDER. You are not hampered by union regulations in making mechanics?

Mr. ANDREWS. We have not been. We have a number of union shops in our yard; that is, where the shop is organized. The men are organized. They deal with us as a committee from each shop, The pattern makers are all organized; the coppersmiths are also, and those are about the only two trades that are really organized.

Senator CALDER. A little while ago you said you were building 19 merchant ships, which had been commandeered.

Mr. ANDREWS. Well, there were more than that; there were 21.

Senator CALDER. Whatever the number——

Mr. ANRDEWS. Yes.

Senator CALDER. Your contracts with the men for whom you are building these ships were made at different prices, I assume?

Mr. ANDREWS. Yes.

Senator CALDER. And you are turning these ships over for the price you had contracted for, plus the additional labor costs and other costs incident to changes in plans?

Mr. ANDREWS. No; that has been changed by the Shipping Board, and I think the contract has been signed. Our ships were taken at a price of $60 to $78 a ton deadweight. The $78 per ton ships were built for the Standard Oil Co. and are fine ships. Those ships to-day would sell for about $220 a ton. In fact, a ship that we built for $700,000 or $800,000 at the time the first one left our yards costs $2,300,000. We had four stock ships which were worth in the neighborhood of $225 per ton when the Shipping Board took these over, and there has been a trade made by which those ships were put in at a certain price. I think we will receive somewhere in the neighborhood of $110 per ton a ship, and the others will go in at the same figure.

Senator CALDER. For all of your commandeered ships?

Mr. ANDREWS. Yes, sir.

Senator CALDER. Will that include all labor charges?

Mr. ANDREWS. Yes; everything. It is cost plus a fixed fee of something like $10.

Senator CALDER. So the Government will be getting those commandeered ships for approximately $110 a ton, and if they were making a contract to-day with you you would charge them what?

Mr. ANDREWS. We would want about $220. We wanted over $220 for the four ships we had. Those were for our own people; in fact, they are paying more than that for old-secondhand ships.

Senator CALDER. Your naval contracts are based on cost plus what percentage?

Mr. ANDREWS. Cost plus for the battle cruiser and the two battleships. The *Idaho* is a straight contract.

Senator CALDER. When was she contracted for?

Mr. ANDREWS. She was contracted for some 36 months ago.

Senator CALDER. And did not come in under the new arrangement?

Mr. ANDREWS. No; we will lose quite a good deal of money on her. The last 20 torpedo boats are taken on the cost plus a fee.

The CHAIRMAN. Are there any other matters you want to bring before the committee?

Mr. ANDREWS. Nothing, unless there is something you want to take up.

Senator CALDER. Have you any suggestion to make as to the best way of advancing the manufacture of merchant ships?

Mr. ANDREWS. These essential things will have to be done if you are going to advance the construction of the ships very much. We have got to have a place for the men to live, and we have got to have some way for them to get to the yard. Of course, the railroads have not the money and they have not the cars. They claim they have 25 cars building in St. Louis, and it is getting to be a pretty old story that they can not get them shipped on here at all.

Senator CALDER. There is no land in the vicinity of your yard where houses could be built?

Mr. ANDREWS. Lots of it.

Senator CALDER. How near?

Mr. ANDREWS. Right across the street.

Senator CALDER. Expensive land?

Mr. ANDREWS. Some of it belongs to a land company. We bought the property of them.

Senator CALDER. How expensive would that land be?

Mr. ANDREWS. That I can not tell you, because I have not followed that at all.

Senator CALDER. Would this be the location at which you would suggest the construction of houses for men?

Mr. ANDREWS. Part of them, and we can go back a mile and get good property there.

Senator CALDER. At a reasonable price?

Mr. ANDREWS. That I can not say how reasonable it is, but I have heard Mr. Neeland, our president, say that they had offered this land to builders and offered to give the builder the land if he would put up the houses, and he could not find any takers. All the builders say that they can not possibly build a house and get out of it at the present prices for labor.

The CHAIRMAN. I would like to read a telegram I have here from Admiral Capps and ask the committee whether it wants him to come on or not. [Reading:]

ROSLYN, N. Y., *January 5, 1918.*

DUNCAN U. FLETCHER,
Chairman Senate Commerce Committee,
United States Capitol, Washington, D. C.:

Your letter of January 2 just received at Roslyn, Long Island, where I am now on leave of absence on account of condition of health. Referring to your specific inquiry, am of opinion there was practically no delay in actual construction of ships, the contracts for which were referred to me by Chairman Hurley for further consideration shortly after he assumed duty with Fleet Corporation. There was great difficulty then and for a long time afterward in obtaining adequate supplies of material, and there were also grave labor difficulties. There was no delay in the consideration of the contracts other than that necessary for their examination and the embodiment therein of changes considered necessary for the better protection of the Government interests. Would prefer not making the journey to Washington at this time, but hold myself at the disposition of the committee if my presence in Washington is considered essential.

W. L. CAPPS.

The CHAIRMAN. You will note he wires from Roslyn, N. Y.

Senator MARTIN. I do not think we should bring him on here in his present state of health, and we can advise him that he will be called later if necessary.

The CHAIRMAN. Then the committee will stand adjourned until 2 o'clock to-morrow afternoon.

(Thereupon, at 5.20 o'clock p. m., the committee stood adjourned to meet to-morrow, Wednesday, January 9, 1918, at 2 o'clock p. m.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

WEDNESDAY, JANUARY 9, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met pursuant to adjournment at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (presiding), Ransdell, Sheppard, Bankhead, Jones, Harding, Calder, and Johnson.

The CHAIRMAN. I think we may proceed. We will hear Mr. Carry.

STATEMENT OF MR. EDWARD F. CARRY, DIRECTOR OF OPERATIONS, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

The CHAIRMAN. Mr. Carry, please state your full name and place of residence.

Mr. CARRY. Edward F. Carry, Chicago, Ill.

The CHAIRMAN. What is your business, Mr. Carry?

Mr. CARRY. You mean in Washington?

The CHAIRMAN. Yes.

Mr. CARRY. Director of operations of the Shipping Board.

The CHAIRMAN. For the Emergency Fleet Corporation?

Mr. CARRY. The Emergency Fleet Corporation and the Shipping Board.

The CHAIRMAN. When did you enter upon those duties, Mr. Carry?

Mr. CARRY. About the 10th of October, 1917.

The CHAIRMAN. What were you engaged in before that?

Mr. CARRY. In the car-building business?

The CHAIRMAN. Where?

Mr. CARRY. The factory is at Michigan City, Ind., and the office is in Chicago. Prior to that I was, as first vice president and general manager, with t he American Car & Foundry Co., from the time of its organization in 1899 until the 1st of January, 1916.

The CHAIRMAN. Did you ever have any experience in transportation or in operating ships of any sort?

Mr. CARRY. No, sir; and I do not attempt to operate ships now. I would like to explain our organization. I was selected because of the business training and executive ability I am supposed to have, to speed up, correlate, and coordinate these different shippng

agencies. We are using those already in existence, not creating new agencies, but trying to effect greater efficiency through those agencies, through the requisitioning of these ships, and putting them under one management.

The CHAIRMAN. What work do you actually perform, Mr. Carry?

Mr. CARRY. Well, we have prepared in our office every morning, from telegraphic reports, a list of every ship in United States ports. We know where they are, to whom they belong, and how long they are in port. Of course, over the neutrals we exercise only perfunctory control. The other ships taken under the requisition order we control absolutely. We allocate ships to the Army and to the allies, and exercise in the coastwise trade, where the Army and Navy are not at stake, priority in movement. In other words, we try to move the things that are necessary for the war—war necessities.

The CHAIRMAN. How many ships are you actually operating for the Emergency Fleet Corporation?

Mr. CARRY. Well, I have quite a little memorandum of that, Senator, and it leads right into matters of military importance. I suppose, perhaps, it would be permissible to give you that in executive session?

The CHAIRMAN. Perhaps that would be better. In the matter of putting the ships to use, are you having any difficulty as to their sailing and their operation?

Mr. CARRY. No. Of course, within the last week or 10 days this extraordinarily cold weather has caused a shortage of coal supply in New York, and there have been ships detained there beyond all reason, but that is a condition that could not have been anticipated or overcome, although the Shipping Board did rush coal to New York from Norfolk before Norfolk froze up. I think that on the whole the operation of our ships has been very efficient. In the last report I had, a day or so ago, the average time in port was 16 days. That accounts for necessary repairs, unavoidable delays due to the necessary cargo not being there, something over which we have no control, and, in fact, every cause of delay. I am told that that is a very satisfactory report.

The CHAIRMAN. There was some complaint about the ships being tied up in New York Harbor and unable to get bunkers, or something of that sort.

Mr. CARRY. Yes, sir; that is true.

The CHAIRMAN. Has that condition been relieved at all?

Mr. CARRY. It is better; yes, sir. That is the condition to which I referred, due largely to the extremely cold weather and the shortage of coal. There have been numerous conferences with the Fuel Administration, and the Shipping Board arranged with the American Steamship Association to appoint a committee to cooperate with the Fuel Administration in delivering this coal to the ships, to exercise priority. In other words, if a ship on berth No. 1 was about ready to sail, she should have coal first rather than some ship at another dock that would not be ready for a week.

There have been some criticisms that are not justified, as to delays due to the necessity for waiting for convoys. For instance, a ship might take five days to load when it could be loaded probably in 48 hours in an emergency by working overtime. Now, if she paid

this overtime and was ready to sail in 48 hours she would simply lie out in the stream for five days until the convoy was made up. So, labor being scarce anyway, they have simply gone about it in a business-like manner and loaded the ship in time to have her to catch the convoy.

Senator BANKHEAD. Have you ever thought of the propriety or advisability of transferring some of this congested shipping from New York to other ports?

Mr. CARRY. Yes, sir; we have.

Senator BANKHEAD. Have you made any effort to do it?

Mr. CARRY. Yes, sir; we have done some of that.

Senator BANKHEAD. How have you succeeded?

Mr. CARRY. For the Italians we have had some steel and grain go by New Orleans. But the cargo piled up so high in New York Harbor that it has got to be moved. There is another point; it requires 12 days more for a ship to make a round trip from Liverpool to New Orleans than from Liverpool to New York.

Senator BANKHEAD. Is that on account of the difference in distance?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. How about Charleston?

Mr. CARRY. The difference in time to Charleston is less. Quoting from memory, that is about three and one-half days.

The CHAIRMAN. How about Jacksonville?

Mr. CARRY. That is longer; I think that is about a week.

The CHAIRMAN. And Savannah?

Mr. CARY. The difference in time to Savannah is, I think, four days. I will be glad to furnish you that information.

Senator CALDER. Could that difference be more than made up by the fact that you would not have a jam at Charleston?

Mr. CARRY. Well, I think so. That is a thing we are investigating now. If it takes a ship 12 days less time to make the round trip and then she has to wait four weeks for a cargo or is delayed for some other cause, there is nothing gained except the saving in fuel.

Senator CALDER. The facilities at New York are better in other respects?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. How many days are required to make the round trip from New York and back, provided they can get dock room and discharge their cargo properly?

Mr. CARRY. Under normal conditions, you mean?

Senator BANKHEAD. Yes.

Mr. CARRY. They ought to make a round trip in three weeks.

Senator BANKHEAD. Then it would take one-third longer to make the round trip to New Orleans or to Charleston?

Mr. CARRY. Yes, sir. It would take a little more than a third; I am taking the average cargo ship. Now that the congestion is so great, it takes from 50 to 60 days to make a round trip. To the Italian ports and to the Mediterranean it takes even longer.

Senator BANKHEAD. You are relieving the situation as far as congestion is concerned in New York?

Mr. CARRY. Yes, sir. They have gone into that pretty thoroughly and are going to try to provide for priority; in other words, store

the material in the country and not on the docks. There are, however, Senator, a great many commodities that could be handled through the southern ports more than they have been, and we are having made a survey of the situation to see how that can be coordinated. There is no reason why that should not be done. For instance, we are trying to arrange to send coal to Panama from Charleston.

Senator BANKHEAD. Why not send the coal to Panama from Mobile?

Mr. CARRY. Well, that may be a desirable port, too.

Senator BANKHEAD. It is nearer than Charleston. You can get your coal at Mobile right down the Warrior River, with a freight rate of about 45 cents as against $1.25 by rail.

Mr. CARRY. That will be considered in their report on that situation.

The CHAIRMAN. Do you have any difficulty about terminals in New York?

Mr. CARRY. No; except for the congestion. They have been piled high with freight that never should have gone to New York. But, as you probably are aware, the War Port Board has been organized in New York—Mr. Hurley is chairman of it—with a view to coordinating all the terminals, including the railroads, so that this cargo will come in in an orderly manner and as it is required. In other words, when a ship is berthed, the cargo will be there, and they will not have to handle 2 or 3 tons of cargo to get 1 ton they want to load.

The CHAIRMAN. Do you have anything to do, Mr. Carry, with the bringing of ships from the Great Lakes through the canal?

Mr. CARRY. Not in a general way; that was arranged before I came here.

The CHAIRMAN. Do you know why they delayed about that as they did? If they were determined to do it, would it not have been better to do it before the winter set in?

Mr. CARRY. Well, I think the truth is the job down there is an enormous one, and there were so many more vital things taking the attention of the commissioners that this one probably came around later than it would have otherwise. But even with that, Senator, had it not been for the unusually severe weather, those ships would have been taken through. As it is, there are only four or five of them that will not be ready to be prepared for service. I think one or two of them are stuck in the ice, but all authorities agree that the date that the last of those ships left the Lakes was such that they should have come through to the Atlantic without being caught in the ice.

Senator BANKHEAD. What is the size of the locks on the Welland Canal?

Mr. CARRY. I do not know, sir.

Senator BANKHEAD. They have got to go through them?

Mr. CARRY. Yes, sir. Twenty of those ships were cut in two; the others came through as built.

Senator BANKHEAD. I think those locks are 250 feet long and 49½ or 50 feet wide. Do you know the depth of the water over the sill?

Mr. CARRY. No, sir; I do not.

Senator BANKHEAD. Do you know what the depth of the channel is, whether it is 7 or 8 feet?

Mr. CARRY. No, sir; I do not.

Senator BANKHEAD. Of course, all of these ships came through without cargo?

Mr. CARRY. Some of them were loaded light. A ship came through with a light cargo of wheat from Duluth.

The CHAIRMAN. How many did you bring through? Do you remember?

Mr. CARY. Forty-five; twenty-four new ships, twenty-one old ones. Sixteen of the twenty-four new ones were turned over to the Navy; the others are in various stages of repair.

The CHAIRMAN. You got nearly all of them through, then?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. What are those ships going to be used for, Mr. Carry?

Mr. CARRY. Cargo ships.

Senator BANKHEAD. Were any of those ships used in carrying coal or ores?

Mr. CARRY. They carried coal, not ores—general cargo, merchandise. They undoubtedly could carry ore, although they were not rigged up for it. They could not afford to carry ore on these ships and compete with the regularly designed ore ships.

Senator BANKHEAD. I did not intend to go into that, but what I had in mind was what these ships were going to be used for.

Mr. CARRY. These ships are going to be used in the coastwise trade for general cargo—cotton; some of them in the New England coal trade for a while to relieve that situation.

The CHAIRMAN. Could the trade on the Lakes spare those ships without great inconvenience?

Mr. CARRY. Well, that was the general impression; yes, sir; before they took them over.

Senator BANKHEAD. They have no commerce up there now.

Mr. CARRY. No, sir. I take it the Senator meant during the open season.

The CHAIRMAN. They are not going back?

Senator BANKHEAD. They may go back. The idea I had in mind in asking my question was this. Do you think a ship of that size that you can bring through that canal, considering the depth of water in the canal, could be used in the overseas trade?

Mr. CARRY. Yes, sir; they can. Those ships are not as desirable, of course, as ships carrying a larger cargo, for two reasons. One is the fact that the amount of coal the ship burns on a trip does not increase in proportion to the size of the ship.

Senator BANKHEAD. Can you take one of those ships and fill up the bunkers for a round trip; would it not be about all the ship could carry? Would she have any tonnage left for cargo?

Mr. CARRY. Oh, yes; she would probably have two-thirds of her tonnage left.

Senator BANKHEAD. You mean to say that one-third of the space in a ship of that size would coal it for a trip from here across and back, a trip of 50 or 60 days?

Mr. CARRY. Of course they would not be sailing 50 or 60 days; they would be lying on the other side. Those are the figures the engineers gave me.

Senator JONES. Do you think those ships were constructed in such a way that they would resist the waves going overseas?

Mr. CARRY. They say they are. I, personally, do not think they are suitable for across-seas service, and we are going to put them in the coastwise trade and take out of the coastwise trade ships that are better suited for trans-Atlantic service.

Senator BANKHEAD. These ships are all steel, are they?

Mr. CARRY. Yes, sir.

The CHAIRMAN. And of about what tonnage?

Mr. CARRY. They run from 3,500 tons dead-weight to about 4,200 tons.

Senator BANKHEAD. You say you have cut a good many of those ships in two?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. How long a process is that? How long does it take to cut one of those ships in two, and how long does it take to put it together again?

Mr. CARRY. It does not take very long to cut them; I do not know the exact time. Of course to put them together temporarily to get them to a dry dock does not take a great deal of time. It is going to require about six weeks to fit up those ships for sea.

Senator BANKHEAD. Can you cut one in two and put it together at all without using a dry dock?

Mr. CARRY. Yes, sir; they put them together in the water and bring them around from Montreal to New York and other ports.

Senator CALDER. I understand you deal only with the operation of the ships?

Mr. CARRY. Yes, sir. I explained—I do not know whether the Senator was here—that we used the existing agencies and tried to speed them up by coordination and correlation of forces.

Senator CALDER. Does the Shipping Board employ the crews and officers?

Mr. CARRY. In some instances; yes, sir. We man some of our ships.

Senator CALDER. Do you have any trouble in getting officers?

Mr. CARRY. No, sir; we have not had any as yet. It is growing more difficult, they tell me.

Senator CALDER. Where do you get your officers from?

Mr. CARRY. Principally in the port of New York.

Senator CALDER. Men who have had previous experience, of course?

Mr. CARRY. Altogether; yes, sir.

Senator CALDER. How about the crews?

Mr. CARRY. Well, they are all able seamen. They take a certain percentage, I presume, of novices—men who are not classed as able seamen.

Senator CALDER. Is there any trouble in getting a sufficient number of men for these crews?

Mr. CARRY. It is growing more difficult. We have not been delayed in manning ships to date.

Senator CALDER. What are you doing to create additional seamen and officers for the ships now coming out?

Mr. CARRY. We have a recruiting service, under the direction of Mr. Henry Howard, of Boston.

Senator CALDER. Please explain what you mean by that.

Mr. CARRY. Well, they will have two ships on which they will take seamen. From ordinary seamen they will train first and second officers. They have a ground school, as it is called, and then the men will go to sea and learn the seaman's trade. They follow the well-known rules and regulations for making seamen.

Senator CALDER. Has the Shipping Board taken into consideration the question of asking the Navy to man merchant ships?

Mr. CARRY. That has been the subject of a number of conferences between the Shipping Board and the Navy Department. At the present moment I do not understand that there has been an irrevocable decision reached in the matter, but the Shipping Board is for the time being turning over to the Army ships on a "bare boat" basis, which means that they will be manned by the Navy.

Senator CALDER. You have not determined on a settled policy for the big fleet when that comes out?

Mr. CARRY. No; I think that will be the subject of further conference.

Senator CALDER. What is your own judgment?

Mr. CARRY. It depends on how you approach that. I have heard criticism of the civilian crew, and I have heard criticism of the Navy crew. The civilian crew consists of an average of 43 men; the Navy puts on three times that many men. That is a criticism from that angle. Up to date the Shipping Board has not had any serious difficulty with its ships manned by civilian crews. It has had some criticism of masters who have failed to do some of the things that the naval officer on board or in charge of the convoy thought they should have done, but in many instances they were exonerated. I think the answer to that depends very largely on a man's point of view.

Senator BANKHEAD. In manning these ships that you control do you observe the provisions of the so-called seamen's act?

Mr. CARRY. Yes, sir. We have a deputy commissioner from the Government assigned to our office in New York.

Senator BANKHEAD. Then you mean to say that these ships you control do not go out with crews made up in violation of the provisions of that law?

Mr. CARRY. No; I should say not; they are either friendly aliens or Americans. Of course, the percentage of Americans is very small; practically nil, I am informed.

Senator JONES. Has not your department, as a matter of fact, waived many of the provisions of the law because of inability to comply with it?

Mr. CARRY. Yes, sir; under the existing circumstances.

Senator BANKHEAD. That is exactly what I was trying to get at.

Senator JONES. In other words, the law is not being carried out?

Mr. CARRY. I do not know whether it is being literally carried out or not; I have not had occasion to go into that. I am told we are complying with the requirements of the deputy commissioner, who has charge of signing on these crews.

Senator JONES. But that does not necessarily mean that they are complying with the law?

Mr. CARRY. I agree with you on that.

Senator JONES. Mr. Carry, have you had any trouble in officering those ships on the Pacific coast?

Mr. CARRY. None whatever that we have heard of in Washington.

Senator JONES. Have you had any complaint about using foreign officers instead of American officers when American officers were available?

Mr. CARRY. No, sir.

Senator JONES. I have had some complaints from out there—I do not know that they referred especially to your organization—claiming that American ships are being officered by foreign officers when American officers of experience are available. I wanted to know whether you knew anything about that or not.

Mr. CARRY. No, sir; that is the first I have heard of it. I am astonished if that is so, because the difficulty in obtaining masters is due to the requirement that they must be Americans or friendly aliens. There are many Norwegian and other masters who have complained that they have been displaced from their vessels because they could not receive the confidential instructions in regard to convoying.

Senator JONES. I am referring to the Pacific coast.

Mr. CARRY. That would not be true out there in regard to the convoying.

Senator JONES. That is what I am talking about now; I have heard nothing about the situation on the eastern coast here. Do you remember whether any complaint has been made in connection with your operations of the use of alien officers on the Pacific when American officers were available?

Mr. CARRY. I am very positive that that has not been so.

Senator JONES. Have you found it very difficult on the Pacific coast to get American officers for the vessels as needed?

Mr. CARRY. I do not know. I think if they had any difficulty they would report it, and, not having had any report or complaint of any kind, I take it they have had no difficulty.

Senator JONES. It would be your policy to use American officers as far as possible?

Mr. CARRY. Absolutely.

Senator JONES. In the commandeered ships, after you commandeered them, did you follow whatever arrangements had been made for crews before they were commandeered?

Mr. CARRY. No, sir.

Senator JONES. You then substituted your own crews and your own officers?

Mr. CARRY. Yes, sir; unless they were turned back to the owners, in which event the owners supplied the crew—in other words, operated the ships for the Shipping Board.

Senator JONES. Would the owner operate it under the flag of his country or under our flag?

Mr. CARRY. Under our flag—I beg your pardon, sir. The foreign ships are all taken over by the Shipping Board.

Senator JONES. And put under our flag?

Mr. CARRY. Yes, sir.

Senator JONES. And manned according to our laws and with our people?

Mr. CARRY. Yes, sir.

The CHAIRMAN. Would you think it feasible, Mr. Carry, to increase eventually the number of skilled men by increasing the crews

on all merchant vessels and by giving them an opportunity to be trained there?

Mr. CARRY. Yes; I think that is being done. They are adding to the crews—I know they are on the Shipping Board ships—to give these men a chance to learn the business.

Senator JOHNSON. The system you have described, Mr. Carry, for the recruiting and education of the crews was put in force at what time, please?

Mr. CARRY. It was under consideration when I came here. It has been actually put in force within the last month.

Senator JOHNSON. It was under consideration for many months then?

Mr. CARRY. Well, yes, Senator; it has been debated pro and con to see if it were really necessary. There has been a difference of opinion on that. There was also the question of funds.

Senator JOHNSON. I am asked to ask you when Mr. Howard was employed?

Mr. CARRY. Mr. Howard was employed before I came here; I do not know the date of his employment.

Senator JOHNSON. Have any ships been lost or injured because of civilian crews?

Mr. CARRY. Not that we know of.

Senator JOHNSON. That is all, sir.

Senator CALDER. Mr. Carry, the thing that concerns me a great deal is whether or not we are going to be able to educate and train men equipped to officer this vast fleet of ships without calling upon the Navy. Do you feel confident that that can be done?

Mr. CARRY. Personally, I hardly feel that I am competent to express an opinion on that. I will quote others who will say it can be done. The representative of the Seamen's Union assures us that it can be done. Mr. Howard reduces to figures his opinion that it will be possible to create these men to man these ships.

The Navy is having difficulty to-day, I am told, in securing men to man its ships, and it has been said that the Navy will have to call upon the civilian crews, to enroll them in the Naval Reserve, as they are doing every day, to man these ships. And so it is going to take the combined efforts of the Navy and the Shipping Board to create the men necessary to man this vast merchant marine that will be created during 1918, I believe.

Senator JONES. How many men will it take to man that many ships?

Mr. CARRY. On an average of 43 men to a ship, 1,000 vessels would require 43,000 men.

Senator JONES. Yes; but if you take a ship of 8,800 tons, how many men would it take to man it?

Mr. CARRY. I am told that 43 will be the maximum; it may run more than that.

Senator JONES. How many does it take on these 3,500-ton wooden ships?

Mr. CARRY. I do not know about the wooden ships. I am told that there was a ship of 3,500 tons—I do not know whether wood or steel—that had a crew of 32 men.

Senator JONES. Do you find many men throughout the country wanting to go aboard these ships as members of the crews?

Mr. CARRY. That I do not know.

Senator JONES. You do not have anything to do with that?

Mr. CARRY. No, sir.

The CHAIRMAN. Do you cooperate with the other departments of the Government in the matter of allocating these ships and assigning them to different routes and that sort of thing?

Mr. CARRY. Yes, sir. We have nothing to do with the ships for the Army or Navy. As soon as they are assigned to the Army or Navy they pass from our control, so far as the operation of the ships is concerned.

The CHAIRMAN. But as to the other ships, do you have to do with ordering them on certain routes?

Mr. CARRY. Yes, sir. We try to ascertain the materials, both exports and imports, that are most needed, and try to dictate the nature of the cargo.

The CHAIRMAN. Does that apply to the neutral ships as well as the Emergency Fleet?

Mr. CARRY. Yes; we can control the neutrals as to exports. We can not, of course, control them as to imports, although with the introduction of the import license we hope as we go along to evolve a plan that will enable us to control them.

Senator BANKHEAD. Did I misunderstand you a while ago when I understood you to say that some of the requisitioned ships that had been completed were turned back to the owners?

Mr. CARRY. Not the foreign ships.

Senator BANKHEAD. I am not speaking about the foreign ships.

Mr. CARRY. In some cases the American ships have been completed, the owners have paid for the ships, completed the transaction, and taken title to them. Then the Shipping Board requisitions them——

Senator BANKHEAD. And you get them back again?

Mr. CARRY. Yes, sir—the control of the ship; we operate the ship. That is, they operate for the Shipping Board under the direction and control of the Shipping Board.

Senator BANKHEAD. How do you compensate them?

Mr. CARRY. They get so much per dead-weight ton.

Senator BANKHEAD. How much do they get?

Mr. CARRY. Well, it is from $5.75 upward, depending upon the speed and the dead-weight capacity of the ship.

Senator BANKHEAD. What would one of those ships earn with an average cargo on a round trip?

Mr. CARRY. Oh, I do not know. I would be glad to take a specimen ship and work it up for you.

Senator BANKHEAD. I would be glad to have you do it. That earning, I understand, goes to the owner of course?

Mr. CARRY. Yes, sir—not the freight. He gets so much per dead-weight ton, and whatever is collected in freights goes to the Government.

Senator BANKHEAD. Where does he get his compensation?

Mr. CARRY. He gets it at $5.75 from the Government.

Senator BANKHEAD. From the Government?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. So the Government pays it in the end?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. The Government builds the ship and turns it over to him, and then pays him so much for carrying the cargo?

Mr. CARRY. Yes; but the Government gets it back.

Senator JONES. Out of that $5.75 that the Government pays him, is he required to pay his crew and all expenses?

Mr. CARRY. He pays some of the expenses. It is a Government form of time charter, in which the owner pays certain expenses and the Government pays certain expenses.

Senator JONES. You say you pay him $5.75 a ton. What would really be the profit that he would make out of that? How much of that would be profit?

Mr. CARRY. That is pretty difficult to determine; that is what we are working on now. Those rates were arrived at after a great deal of considertion, and are more or less tentative. The requisitioning program contemplated a review of the whole situation after 90 days. We now have expert accountants working on that to determine whether those rates are fair—whether they are too low or too high—with a view to revising them.

Senator JONES. Then who fixes the freight charges?

Mr. CARRY. Well, the Shipping Board does to some extent, but, of course, the neutrals are really the ones who fix them to-day, because we can not control.

Senator BANKHEAD. We are not talking about neutral ships; we are talking about those owned and operated by the Shipping Board.

Mr. CARRY. Yes, sir; but the point is this. To illustrate, if the neutral made a rate of 25 cents a pair on shoes to Italy and the Shipping Board made a rate of 15 cents, the rate would be 25 cents a pair when the shoes reached Italy.

Senator JONES. Are you not working any reduction in these so-called exorbitant rates?

Mr. CARRY. Right along; yes, sir.

Senator JONES. How are you doing it?

Mr. CARRY. Well, we are dictating the rates.

Senator JONES. That is what I am trying to get at.

Mr. CARRY. For instance, if a rate were $60 we probably would reduce it to $50, but no man knows as yet what it is costing to handle freight under existing conditions. We have experts making a survey of that so that we can act intelligently.

Senator JONES. How long have you been operating some of these ships?

Mr. CARRY. Since the 15th of October.

Senator JONES. None of them were operated before that?

Mr. CARRY. By the Shipping Board?

Senator JONES. Yes.

Mr. CARRY. Oh, yes; we have operated some in our New York office.

Senator JONES. How long?

Mr. CARRY. I do not know when they put this into operation. The German ships were taken over and put under the control of the New York office before I came here.

Senator JONES. How long do you think it would taken them to ascertain about what the cost of this transportation by ship is?

Mr. CARRY. By February or the middle of March they say we will have returns on various voyages.

Senator BANKHEAD. I have not got those figures quite clear in my mind. These requisitioned ships that you are talking about, are completed and turned over to the owner, and then you requisition them again and take them under your control? Am I right about that?

Mr. CARRY. Yes, sir.

Senator BANKHEAD. One of those ships loads at New York, takes on a cargo for some foreign port. About what does that ship get per ton for carrying that cargo over?

Mr. CARRY. It depends on the cargo.

Senator BANKHEAD. Say wheat, or cotton.

Mr. CARRY. Well, they would get for wheat to-day probably $60 or $70 a ton.

Senator BANKHEAD. And the ship carries 5,000 tons?

Mr. CARRY. Yes.

Senator BANKHEAD. That is $300,000 for a ship?

Mr. CARRY. Yes.

Senator BANKHEAD. About what is the cost of that ship?

Mr. CARRY. The ship would cost probably $2,000,000 to-day.

Senator BANKHEAD. Yes, it might possibly; but that sized ship does not cost that much, does it?

Mr. CARRY. I am told that.

Senator BANKHEAD. Suppose it cost $2,000,000. If it could make a like sum on the return trip——

Mr. CARRY. The ship does not carry a cargo on the return trip; it comes back empty, in ballast.

Senator BANKHEAD. All of them come back that way?

Mr. CARRY. Absolutely.

Senator BANKHEAD. Who brings the imports then?

Mr. CARRY. Well, there are practically no imports. And then instead of making a trip in from two to three weeks, as under normal conditions, she is taking from 50 to 60 days. Her war risk and other insurance has increased 100 per cent, they tell me. The time required to make the trip is very great, and delays to secure ballast and other necessaries run the cost up so that no man can tell what it will be.

Senator BANKHEAD. Can you tell the committee about what that ship would have charged for that same cargo before you took it?

Mr. CARRY. You mean before the war?

Senator BANKHEAD. No; I do not mean before the war; I mean since the Shipping Board took charge.

Mr. CARRY. The rates have come down since the Shipping Board took charge. How much I can not tell you offhand.

Senator JONES. Do you fix the rates you charge on the prevailing rates?

Mr. CARRY. To some extent. You understand, we do not attempt to fix every rate. The charter committee in New York fixes the charter rate at which a ship can be chartered and attempts to some extent to regulate the berth rates, but they can not do that absolutely, a neutral will come along and make any rate he desires, and we have no means of controlling that as yet.

Senator BANKHEAD. That board in New York is a part of your organization that you are talking about?

Mr. CARRY. Yes; the charter board is a part of our organization.

I would like to make clear to the Senator, though, that any income from that voyage in the way of trade belongs to the Government; the owner of that ship gets nothing on that. If his ship cost $1,000,000, he pays over his $1,000,000 and gets title to his ship. Then the Government requisitions that ship and pays him the requisition rate, which runs from $5.75 up to whatever it may be, depending on the dead-weight tonnage and the speed of the ship.

Senator BANKHEAD. Is that $5.75 per ton?

Mr. CARRY. Per dead-weight ton.

Senator BANKHEAD. I am more befogged now than I was before.

The CHAIRMAN. Suppose the ship is lost after you have requisitioned it; whose loss it that?

Mr. CARRY. That is the Government's loss. We carry the war risk.

The CHAIRMAN. Before you turn the ship over to the owner, the owner must pay back to the Government all it has cost the Government to build the ship?

Mr. CARRY. Absolutely; every cent.

The CHAIRMAN. Do you have any transactions where you postpone any of those payments?

Mr. CARRY. I do not know, sir. That would not be in my department; I do not know that.

Senator JONES. What is the idea of turning it over to him again, and then turning around and requisitioning it?

Mr. CARRY. It saves the Government investing millions of dollars. The ship belonged to the man originally, and the Government wants the use of the ship and wants to control its activities.

Senator JONES. Why not keep it when you have it——

Senator BANKHEAD. And you have paid for it?

Mr. CARRY. No; we have not paid for it.

Senator BANKHEAD. I do not want to be asking unnecessary or foolish questions, but I understand you to say that when these ships are requisitioned the Government pays for the building of them?

Mr. CARRY. The foreign ships; yes, sir.

Senator BANKHEAD. I am not talking about the foreign ships; I mean our own ships.

Mr. CARRY. No; the Government does not pay for the building. It may in some instances, but as a general rule it does not pay. It gives the original owner permission to pay for that ship and take title to it, and then it automatically comes under the requisitioning program of the Government through the Shipping Board.

Senator RANSDELL. Do you find that the men who give the contracts for these ships are willing to pay for them and take title under those circumstances?

Mr. CARRY. They are; yes, sir. They are doing it right along.

Senator BANKHEAD. I do not see why they should not.

Mr. CARRY. Well, they complain now and then of the excess cost of a ship over what she was originally contracted for.

Senator RANSDELL. Is there any basis upon which they are allowed to earn a fair percentage on their investment, or do they make the extraordinary profits which they say shipping is earning nowadays?

Mr. CARRY. The requisition rates were designed, after thorough consideration, to give them a fair return only on their investment.

Senator RANSDELL. And if the ship earns more it goes to the Government?

Mr. CARRY. It goes to the Government.

Senator RANSDELL. That rate, I understand you to say, is $5.75?

Mr. CARRY. The rate per dead-weight ton paid to the owner of the ship is $5.75 minimum. For passenger ships it runs way up, of course.

The CHAIRMAN. Are there any further questions before we take up these other matters? If not, I will state here that it was the request of Senator Nelson that these various schedules of timber be printed as a part of our hearings.

Then, there were some questions asked regarding the American Bureau of Shipping. Here is a memorandum submitted with reference to that bureau, showing what it is, what work it is doing, etc. I take it that had better be put in. Then, there is a letter addressed to Admiral Capps, outlining the history and work of the American Bureau of Shipping.

(The timber schedules and the memoranda relating to the American Bureau of Shipping referred to are here printed is full, as follows:)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION, TIMBER SCHEDULE AND SPECIFICATIONS FOR STANDARD WOOD STEAMSHIP, GULF AND ATLANTIC COAST, LARGELY SOUTHERN YELLOW PINE.

[Revised Nov. 1, 1917. No. 23. Supersedes No. 18.]

GENERAL INFORMATION.

This schedule has been drafted for the information and guidance of lumber mills, contractors, and shipbuilders, and constitutes the official schedule of timbers to be used in the construction of wooden vessels on the Gulf and Atlantic coasts. It does not, however, definitely define the exact number of timbers nor the exact amount of board feet that will be required to build a standard wood steamship. Builders may find it necessary to purchase additional items in order to complete the construction of the vessel to requirements of the Classification Society.

The purchase and inspection of lumber under this schedule will be conducted by the Emergency Fleet Corporation or under its direction.

Inspections will be made at the mills where lumber is manufactured.

Approved November 1, 1917.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.
W. L. CAPPS, *General Manager.*

RULES GOVERNING TIMBER SCHEDULE.

The accompanying lumber schedule is governed strictly by the following rules:

1. Dimensions of timbers in the form to be used in the ship are net, after surfacing. Material must be sawed large enough to surface down to these dimensions. Dimensions and quantities in the rough, in accordance with the usual milling practice, are given separately for the information of manufacturers.

2. The specification of "Dense merchantable" yellow pine means the following, as quoted from the January 1, 1917, grading rules issued by the Southern Pine Association:

"All merchantable timbers shall be well manufactured and shall be free from defects such as injurious ring and round shakes and through shakes that extend to the surface, unsound and loose knots, and knots in groups that will

materially impair the strength. Seasoning checks and sap stain shall not be considered defects.

"Sizes under 9 inches on the largest dimension shall show two-thirds or more heart surface on one of the wide faces; sizes 9 inches and over on the largest dimension shall show two-thirds or more heart on both of the wide faces. When sticks are square the face showing the most heart shall govern the inspection on sizes under 9 inches and the two faces showing the most heart shall govern the inspection when 9 inches and over. Heart showing the full length, even if not two-thirds of the area as above, shall meet the requirements of this quality.

"Wane not exceeding one-eighth of the dimension of the face and one-quarter of the length of the piece on one corner, or the equivalent on two or more corners on not to exceed 10 per cent of the pieces, shall be admitted.

"Dense southern yellow pine shall show on either end an average of at least six annual rings per inch and at least one-third summer wood, or else the greater number of the rings shall show at least one-third summer wood, all as measured over the third, fourth, and fifth inches of a radial line from the pith. Wide-ringed material excluded by this rule will be acceptable, provided that the amount of summer wood as above measured shall be at least one-half.

"The contrast in color between summer wood and spring wood shall be sharp and the summer wood shall be dark in color, except in pieces having considerably above the minimum requirement for summer wood.

"In cases where timbers do not contain the pith, and it is impossible to locate it with any degree of accuracy, the same inspection shall be made over 3 inches on an approximate radial line beginning at the edge nearest the pith in timbers over 3 inches in thickness and on the second inch (on the piece) nearest to the pith in timbers 3 inches or less in thickness.

"In dimension material containing the pith but not a 5-inch radial line, which is less than 2 by 8 inches in section or less than 8 inches in width, that does not show over 16 square inches on the cross section, the inspection shall apply to the second inch from the pith. In larger material that does not show a 5-inch radial line the inspection shall apply to the 3 inches farthest from the pith.

"The radial line chosen shall be representative. In case of disagreement between purchaser and seller, the average summer wood and number of rings shall be the average of the two radial lines chosen."

3. Items 29, 97, 99, 102, 106, 107, 108, 110, 111, 112, 115, 118, 122, 123, 134, and 136 are to be furnished under the density rule but one wide face of every piece must be all heart, free of wane. All these timbers except item 29 must show on edges adjoining the heart face 85 per cent heart the full length of stick, which may be reduced to three-fourths of the length for item 29.

4. The specifications govern'ng yellow-pine grades No. 1 common, A edge grain flooring, and A finish are given in the Standard Specifications for Grades of Southern Yellow Pine Lumber issued by the Southern Pine Association April 1, 1917.

5. Cypress timbers shall be equivalent in grade to No. 1 common. The specifications governing cypress grades are given in the Standard Grades and Classifications of the Southern Cypress Manufacturers' Association, edition of January 1, 1917.

6. Oak items, unless otherwise specified, shall be selected stock from the grade of construction oak timbers. The specifications governing oak grades are given in Association Standard Grades, issued by the Hardwood Manufacturers' Association of the United States October 1, 1915.

7. Knees shall be free from rot, heat, or ring shake, large or loose knots, and other defects which would impair their strength for the purpose intended. They must be natural crooks.

8. Treenails shall be of clear all-heart wood, straight grained, and thoroughly air dried.

9. Unsurfaced items 40 feet long and over and 18 by 18 inches and over may be furnished by the mills either hewn or sawed. If furnished hewn, such items shall run a full inch over the specified size and be square edged and of uniform size throughout.

Items 145, 146, 147, 148, 149, 150, and 151, oak timbers, may be furnished by the mills either hewn or sawed. If furnished hewn, they shall run a full inch over the specified size and be square edged and of uniform size throughout.

10. Any finished timbers in this schedule which shipbuilders may desire to have furnished rough, gross size, may be furnished that way by mutual arrangement with the mills designated to saw the timbers.

11. The frame timbers to be either square edged or flitches, provided that the specified width is obtained at the narrowest point inside of the bark, except where templets are used as provided for in rule 16.

12. All timbers that are furnished rough can be put into ships unsurfaced except as regards necessary surfacing to make a good workmanlike job in the fitting of the timbers and the surfacing that would be brought about by having to shape the timbers.

13. *Substitutions.*—Any yellow-pine items can be furnished in real white oak or live oak of the sizes as specified. Any of the large sized yellow-pine timbers except the keel, keelsons, frames, and stanchions may be furnished in fir if desired, in the same sizes as shown in this schedule.

Items specified to be furnished in white oak can be furnished in live oak or greenheart, but not in fir or yellow pine, except that the keel shoe may be of gum or other material approved by the American Bureau of Shipping.

The frames may be furnished in red swamp cypress in the same sizes as given in the schedule. Red swamp cypress may also be substituted for the aprons, deadwoods, hooks, and pointers in the same sizes as given in the schedule. These are items 7, 10, 12, and 125.

14. Firms which do not have facilities for manufacturing finished treenails, but which wish to supply rough lumber from which treenails may be made by shipbuilding firms, may find the following suggestions helpful:

Item No. 1, finished, size 1¼ by 26 inches; quantity, 4,500. Can be manufactured from 1½ by 1½ by 26 inches rough dimension stock. Amount of lumber in each piece is 0.405 board foot.

Item No. 2, finished, size 1⅝ by 32 inches; quantity, 12,500. Can be made from 1½ by 1½ by 32 inches rough dimension stock, each piece containing one-half board foot.

Item No. 3, finished, size 1⅝ by 36 inches; quantity, 7,500 pieces. Can be made from 1½ by 1½ by 36 inches rough dimension stock, each piece containing 0.562 board foot.

15. In view of portions of certain of the timbers being cut away by shaping, scarfs, etc., the following defects may be allowed, in the discretion of the owner's timber inspector:

Item 4. *Knightheads:* These can have 12 inches of wane the entire length of one corner or any other defect that will work out.

Item 5. *Stem:* Wane or any other defect anywhere in the piece that will work out when timber is shaped will be allowed.

Items 23, 26, and 27. *Hatch strong backs:* These can have wane the entire length on two corners or any other defect that will work out when timber is shaped.

Item 32. *Clamp timbers:* 2,400 linear feet of these can have 5 inches of wane the entire length on one corner or any other defect that will work out when timber is shaped. Splits, shakes, or any other defects in the end that will work out in the scarf will be allowed.

Items 31 and 56. *Bilge ceiling:* 2 inches of wane or other defects that will work out will be allowed on two corners or sides on 600 linear feet of item No. 31 and 400 linear feet of item No. 56.

Items 41 to 52. *Upper deck beams:* Wane or any other defect will be allowed that will work out when the timber is shaped to 14 inches in width or as shown by plan of typical midship beam. In this connection it may be stated that items 41 to 51, inclusive, have the same camber in proportion to their length beginning at the center as item No. 52.

Items 77 and 78. *Hatch coamings:* These can have wane on one corner the entire length or any other defect that will work out.

Items 18, 19, 29, 31, 32, 34, 56, 57, 64, 65, 69, 70, and 76 will allow wane, splits, shakes, or any other defects that will work out on half splice or scarfs.

16. It is desirable to use natural crooks as much as possible for curved timbers, and the dimensions of a number of the frame timbers can be considerably reduced by their use. To assist in this work templets showing the shape of the finished timber can be employed. Templets should be large enough to allow for the bevel of the frames. The detail frame plan will show the shape of the frame timbers, and the difference between the net size and the mill size there specified will show the amount to be added to the width as drawn to obtain the necessary width of the templet. Unless the templets are furnished by the shipbuilder they should be used only as a general guide in the selection of the timbers. All shipbuilders are to furnish the mills with paper templets, showing the finished size of flitches, 20 inches and wider. The width for invoicing shall be obtained by

measuring the width on both faces at the mid-length, adding together and dividing by two.

17. If the bilge planking is not edge bolted and the bilge frames are sawed out of wide flitches instead of being cut from natural crooks, filling floors will have to be fitted at the bilges in accordance with drawing 373 No. 18A. The edge bolting of the planks is preferred.

18. All timbers should be marked with paint on ends with the item number.

19. Short timbers may be furnished in multiples if the pieces are properly marked. Thus, a 14-foot piece for two 35A items should be marked 35A2, a 16-foot piece for one 35E, and one 35G item should be marked 35E&G.

20. The dressed side of planking shall be the heart side and this side is to be placed against the frames.

Timber schedule for standard wood steamship—Gulf and Atlantic coast.

Item.	Item prices.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
			Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
1	$36.50	Rudder blade	.....	16x18	.....	20	1	480	Rough.	Yellow pine, dense merchantable.
2	41.06	.....do	.....	16x18	.....	26	1	624	Rough.	Do.
3	91.25	Hull end framing.	.....	12x24	240	16 to 32 av., 24	10	5,760	Rough.	Do.
4	91.25	Knightheads	.....	16x24	.....	40	2	2,560	Rough.	Do.
5	91.25	Stem	.....	16x20	.....	44	1	1,173	Rough.	Do.
6	38.32	Rudder blade	.....	16x16	.....	28	1	597	Rough.	Do.
7	51.10	Apron	.....	16x18	.....	44	2	2,112	Rough.	Do.
8	68.43	Rudder blade	.....	16x22	.....	22	1	645	Rough.	Do.
9	91.25	Hull end framing.	.....	12x22	120	16 to 32 av., 24	5	2,640	Rough.	Do.
10	31.94	Forward deadwood.	.....	14x16	.....	20	9	3,360	Rough.	Do.
11	31.94	Hold beams	.....	14x16	.....	20	2	747	Rough.	Do.
12	34.67	After deadwood	.....	14x16	.....	22	9	3,696	Rough.	Do.
13	38.32	Hold beams	.....	14x16	.....	30	2	1,120	Rough.	Do.
14	41.97	.....do	.....	14x16	.....	36	2	1,344	Rough.	Do.
15	45.62	.....do	.....	14x16	.....	40	2	1,493	Rough.	Do.
16	48.36	.....do	.....	14x16	.....	42	2	1,568	Rough.	Do.
17	51.10	.....do	.....	14x16	.....	44	46	37,780	Rough.	Do.
18	51.10	Keel	.....	14x16	.....	44	3	2 464	Rough.	Do
19	54.75	.....do	.....	14x16	.....	48	4	3,584	Rough.	Do.
20	27.37	Stern framing	.....	14x14	.....	10	34	5,553	Rough.	Do.
21	31.94	Rudder blade	.....	14x16	.....	12	1	224	Rough.	Do.
22	27.37	Girder timbers and hatch coamings.	13¾x13¾	14x14	.....	16	8	2,091	S4S	Do.
23	29.20	Hatch strongbacks.	13¾x13¾	14x14	.....	17	2	555	S4S	Do.
24	27.37	Stern framing	.....	14x14	.....	18	34	9,996	Rough.	Do.
25	.....	(Omitted.)								
26	31.02	Hatch strongback	13¾x13¾	14x14	.....	21	1	343	S4S	Do.
27	31.94	.....do	13¾x13¾	14x14	.....	25	1	408	S4S	Do.
28	.....	(Omitted.)								
29	45.59	Upper deck waterway.	.....	14x14	1,400	24 to 40 Av.,32	.....	22,867	Rough.	Yellow pine, dense (see rule 3).
30	35.59	Girder timbers and hatch coamings.	13¾x13¾	14x14	1,400	24 to 40 Av.,32	.....	22,867	S4S	Yellow pine, dense, merchantable.
31	35.59	Bilge ceiling	.....	14x14	2,000	24 to 40 Av.,32	.....	32,667	Rough.	Do.
32	42.89	Clamp timbers	13¾x13¾	14x14	3,600	30 to 50 Av.,40	.....	58,800	S4S	Do.
33A	31.94	Engine foundation keelsons.	13¾x13¾	14x14	.....	24	2	784	S4S	Do.
33B	31.94	.....do	13¾x13¾	14x14	.....	28	2	915	S4S	Do.
33C	38.32	.....do	13¾x13¾	14x14	.....	30	11	5,389	S4S	Do.
33D	41.97	.....do	13¾x13¾	14x14	.....	36	1	588	S4S	Do.
33E	45.62	.....do	13¾x13¾	14x14	.....	45	1	735	S4S	Do.
33F	31.94	.....do	9¾x13¾	10x14	.....	24	2	560	S4S	Do.
34	50.19	Main keelsons	13¾x13¾	14x14	.....	48	56	43,904	S4S	Do.
36	.....	(Omitted.)								
35A	100.00	Frames	.....	12x34	.....	7	2	476	Rough.	Yellow pine, dense merchantable (see rule 19).
35B	100.00	.....do	.....	12x32	.....	8	22	5,632	Rough.	Do.
35C	100.00	.....do	.....	12x32	.....	9	10	2,880	Rough.	Do.
35D	90.00	.....do	.....	12x30	.....	6	78	14,040	Rough.	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Item prices.	Part.	et size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
			Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
35E	$90.00	Frames		12x30		7	6	1,260	Rough.	Yellow pine, dense merchantable (see rule 19).
35F	90.00	do		12x30		8	44	10,560	Rough.	Do.
35G	90.00	do		12x30		9	22	5,940	Rough.	Do
35H	90.00	do		12x30		10	16	4,800	Rough.	Do.
35I	90.00	do		12x30		11	10	3,300	Rough.	Do.
35J	82.25	do		12x28		6	24	4,032	Rough.	Do.
35K	82.25	do		12x28		8	76	17,024	Rough.	Do.
35L	82.25	do		12x28		9	82	20,664	Rough.	Do.
35M	82.25	do		12x28		10	6	1,680	Rough.	Do.
35N	82.25	do		12x28		11	16	4,928	Rough.	Do.
35O	82.25	do		12x28		15	16	6,720	Rough.	Do.
35P	79.50	do		12x26		9	30	7,020	Rough.	Do.
35Q	79.50	do		12x26		11	12	3,432	Rough.	Do.
35R	79.50	do		12x26		12	14	4,368	Rough.	Do.
35S	79.50	do		12x26		14	6	2,184	Rough.	Do.
35T	77.50	do		12x24		9	20	4,320	Rough.	Do.
35V	77.50	do		12x24		10	8	1,920	Rough.	Do.
35W	77.50	do		12x24		12	18	5,184	Rough.	Do.
35X	77.50	do		12x24		13	8	2,496	Rough.	Do.
35Y	77.50	do		12x24		14	16	5,376	Rough.	Do.
35Z	82.25	do		12x24		19	12	5,472	Rough.	Do.
37A	69.50	do		12x22		8	8	1,408	Rough.	Do.
37B	69.50	do		12x22		9	16	3,168	Rough.	Do.
37C	69.50	do		12x22		10	6	1,320	Rough.	Do.
37D	69.50	do		12x22		12	18	4,752	Rough.	Do.
37F	69.50	do		12x22		14	22	6,776	Rough.	Do.
37F	69.50	do		12x22		16	8	2,816	Rough.	Do.
37G	41.06	do		12x20		6	6	720	Rough.	Do.
37H	41.06	do		12x20		9	6	1,080	Rough.	Do.
37I	41.06	do		12x20		10	10	2,000	Rough.	Do.
37J	41.06	do		12x20		11	10	2,200	Rough.	Do.
37K	41.06	do		12x20		12	14	3,360	Rough.	Do.
37L	41.06	do		12x20		14	8	2,240	Rough.	Do.
37M	44.06	do		12x20		22	8	3,520	Rough.	Do.
38A	36.20	do		12x18		8	8	1,152	Rough.	Do.
38B	36.20	do		12x18		9	12	1,944	Rough.	Do.
38C	36.20	do		12x18		10	18	3,240	Rough.	Do.
38D	36.20	do		12x18		11	10	1,980	Rough.	Do.
38F	36.20	do		12x18		12	32	6,912	Rough.	Do.
38F	39.20	do		12x18		13	8	1,872	Rough.	Do.
38G	39.20	do		12x18		14	8	2,016	Rough.	Do.
38H	39.20	do		12x18		15	62	16,740	Rough.	Do.
38I	39.20	do		12x18		16	20	5,760	Rough.	Do.
38J	39.20	do		12x18		18	8	2,592	Rough.	Do.
38K	41.20	do		12x18		22	6	2,376	Rough.	Do.
39A	31.93	do		12x16		6	6	576	Rough.	Do.
39B	31.93	do		12x16		11	8	1,408	Rough.	Do.
39C	31.93	do		12x16		12	20	3,840	Rough.	Do.
39D	31.93	do		12x16		16	8	2,048	Rough.	Do.
39E	31.93	do		12x16		18	14	4,032	Rough.	Do.
39F	36.00	do		12x16		23	8	2,944	Rough.	Do.
39G	38.31	do		12x16		30	8	3,840	Rough.	Do.
39H	40.31	do		12x16		32	10	5,120	Rough.	Do.
39I	41.31	do		12x16		33	78	41,184	Rough.	Do.
39J	27.36	do		12x14		8	6	672	Rough.	Do.
39K	27.36	do		12x14		14	8	1,568	Rough.	Do.
39L	27.36	do		12x14		17	16	3,808	Rough.	Do.
39M	27.36	do		12x14		18	16	4,032	Rough.	Do.
39N	27.36	do		12x14		20	8	2,240	Rough.	Do.
39O	31.50	do		12x14		22	6	1,848	Rough.	Do.
39P	31.50	do		12x14		23	8	2,576	Rough.	Do.
39Q	35.58	do		12x14		30	8	3,360	Rough.	Do.
39R	35.58	do		12x14		32	10	4,480	Rough.	Do.
39S	35.58	do		12x14		33	78	36,036	Rough.	Do.
40A	24.63	do		12x12		6	8	576	Rough.	Do.
40B	24.63	do		12x12		12	16	2,304	Rough.	Do.
40C	24.63	do		12x12		16	134	25,724	Rough.	Do.
40D	25.63	do		12x12		18	8	1,728	Rough.	Do.
40E	24.63	do		10x12		10	54	5,400	Rough.	Do.
41	36.50	Upper deck beams		12x16		26	2	832	Rough.	Do.
42	36.50	do		12x16		26	2	832	Rough.	Do.
43	43.80	do		12x18		30	1	540	Rough.	Do.
44	45.62	do		12x18		32	2	1,152	Rough.	Do.
45	45.62	do		12x18		32	2	1,152	Rough.	Do.
46	50.19	do		12x18		34	2	1,224	Rough.	Do.
47	50.19	do		12x18		36	2	1,296	Rough.	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Item prices.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
			Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
48	$50.19	Upper deck beams.	.....	12x18	.....	36	2	1,296	Rough.	Yellow pine, dense merchantable (see rule 19).
49	54.75	.....do.....	.....	12x18	.....	38	2	1,368	Rough.	Do.
50	54.75	.....do.....	.....	12x18	.....	40	3	2,160	Rough.	Do.
51	54.75	.....do.....	.....	12x18	.....	40	2	1,440	Rough.	Do.
52	59.31	.....do.....	.....	12x18	.....	44	40	31,680	Rough.	Do.
53	.....	(Omitted.)								
54	31.94	Upper deck short beams.	.....	12x16	.....	16	66	16,896	Rough.	Do.
55	.....	(Omitted.)								
56	35.59	Bilge ceiling.....	.....	12x14	3,000	24 to 40 av., 32	.....	42,000	Rough.	Do.
57	42.89	Shelf timbers.....	11¾x13¾	12x14	700	30 to 50 av., 40	.....	9,800	S4S....	Do.
58	.....	(Omitted.)								
59	24.64	Stanchions.....	.....	12x12	.....	10	15	1,800	Rough.	Do.
60	.....	(Omitted.)								
61	24.64	Stanchions.....	.....	12x12	.....	14	15	2,520	Rough.	Do.
62	24.64	Girder timbers and hatch coamings.	11¾x11¾	12x12	.....	16	8	1,536	S4S....	Do.
63	27.37	Stanchions.....	.....	12x12	.....	24	36	10,368	Rough.	
64	32.85	Girder timbers and hatch coamings.	11¾x11¾	12x12	500	24 to 40 av., 32	.....	6,000	S4S....	Do.
65	40.15	Shelf timbers.....	11¾x11¾	12x12	1,800	30 to 50 av., 40	.....	21,600	S4S....	Do.
66A	24.63	Cant frames.....	.....	10x12	.....	8	36	2,880	Rough.	Do.
66B	24.63	.....do.....	.....	10x12	.....	10	32	3,200	Rough.	Do.
66C	24.63	.....do.....	.....	10x12	.....	12	16	1,920	Rough.	Do.
67A	77.55	.....do.....	.....	10x24	.....	8	18	2,880	Rough.	Do.
67B	77.55	.....do.....	.....	10x24	.....	9	6	1,080	Rough.	Do.
67C	77.55	.....do.....	.....	10x24	.....	12	4	960	Rough.	Do.
68	31.94	Engine bed floors.	.....	12x16	.....	18	20	5,760	Rough.	Do.
69	41.06	Planking, garboards.	9¾x13¾	10x14	.....	40	14	6,533	S1S2E..	Yellow pine (square edged), dense merchantable (see rule 20).
70	41.97	Girder keelsons...	9¾x13¾	10x14	.....	45	12	6,300	S4S....	Yellow pine dense merchantable.
71	26.46	Hatch strongbacks.	9¾x11¾	10x12	.....	17	4	680	S4S....	Do.
72	24.64	Headers.....	9¾x11¾	10x12	.....	20	4	800	S4S....	Do.
73	28.29	Hatch strongbacks.	9¾x11¾	10x12	.....	21	2	420	S4S....	Do.
74	29.20	.....do.....	9¾x11¾	10x12	.....	25	2	500	S4S....	Do.
75	32.84	Side ceiling.....	10 x11¾	10x12	8,000	24 to 40 av., 32	.....	80,000	S2S....	Do.
76	40.15	Shelf timbers.....	9¾x11¾	10x12	2,200	30 to 50 av., 40	.....	22,000	S4S....	Do.
77	22.81	Girder timbers and hatch coamings.	9¾x9¾	10x10	.....	16	8	1,067	S4S....	Do.
78	24.64	.....do.....	9¾x9¾	10x10	.....	24	8	1,600	S4S....	Do.
79	36.50	Poop, bridge, and forecastle deck beams.	.....	10x10	.....	45	6	2,250	Rough.	Do
80	91.25	Forecastle and poop deck plank-sheer.	7¾x26	8x26	.....	20	14	4,853	S2S....	Do.
81	35.59	Poop, bridge, and forecastle deck plank-sheer.	7¾x13¾	8x14	320	24 to 40 av., 32	.....	2,986	S4S....	Do.
82	38.32	Planking, garboards.	7¾x13¾	8x14	560	30 to 40 av., 35	16	5,226	S1S2E .	Yellow pine, dense merchantable (see rule 20).
83	41.97	Girder keelsons..	7¾x13¾	8x14	.....	45	20	8,400	S4S....	Yellow pine, dense merchantable.
84	37.84	Bulkhead studding.	7¾x11¾	8x12	500	24 to 40 av., 32	.....	4,000	S4S....	Do.
85	24.63	.....do.....	11¾x11¾	12x12	.....	20	10	2,400	S4S....	Do.
86	.....	(Omitted.)								
87	32.81	Floor ceiling.....	8x11¾	8x12	6,700	24 to 40 av., 32	.....	53,600	S2E....	Do.
88	24.64	Sills and plates...	7¾x9¾	8x10	200	20 to 30 av., 24	.....	1,333	S4S....	Do.
89	21.90	Sills.....	7¾x7¾	8x8	.....	20	6	640	S4S....	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Item prices.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Splices and grade.
			Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
90	$28.72	Poop, bridge, and forecastle deck beams.	6¼x9¾	7x10	.....	17	16	1,567	S4S....	Yellow pine, dense merchantable.
91	24.64	.....do.....	6¾x9¾	7x10	.....	24	8	1,120	S4S....	Do.
92	31.94	.....do.....	6¾x9¾	7x10	.....	38	15	3,325	S4S....	Do.
93	36.50	.....do.....	6¾x9¾	7x10	.....	45	18	4,725	S4S....	Do.
94	52.92	Planking, main rail.	.....	6x19	500	24 to 40 av., 32	.....	4,750	Rough.	Yellow pine (square edged), dense merchantable.
95	38.32	Planking, garboards.	6x13¾	6½x14	360	30 to 40 av., 35	16	4,083	S1S2E..	Yellow pine (square edged), dense merchantable (see rule 20).
96	24.64	Sills and plates...	5¾x9¾	6x10	250	20 to 30 av., 24	.....	1,250	S4S....	Yellow pine, dense merchantable.
97	35.20	Planking, bilge...	6x9¾	6½x10	8,000	24 to 40 av., 32	.....	41,667	S1S2E..	Yellow pine (square edged), dense (see rules 3 and 20).
98	32.84	Shaft tunnel.....	9¾x11¾	10x12	1,600	24 to 40 av., 32	.....	16,000	S4S....	Yellow pine, dense merchantable.
99	35.20	Planking, topside.	6x8¾	6½x9	8,000	24 to 40 av., 32	.....	37,500	S1S2E..	Yellow pine (square edged), dense (see rules 3 and 20).
100	21.90	Studding.....	5¾x7¾	6x8	.....	8	60	1,920	S4S....	Yellow pine, dense merchantable.
101	22.81	Sills and plates...	5¾x7¾	6x8	250	20 to 30 av., 24	.....	1,000	S4S....	Do.
102	31.00	Poop, bridge, and forecastle decks, lock streak.	.....	6x8	320	24 to 40 av., 32	.....	1,280	Rough.	Yellow pine, dense (see rules 3 and 20).
103	26.00	Poop, bridge, and forecastle decks, shelf.	.....	6x8	320	24 to 40 av., 32	.....	1,280	Rough.	Yellow pine, dense merchantable.
104	21.90	Studding.....	5¾x5¾	6x6	.....	7	40	840	S4S....	Do.
105	22.81	Sills and plates...	5¾x5¾	6x6	200	20 to 30 av., 24	.....	600	S4S....	Do.
106	31.00	Planking, bead streak.	6x6	6½x6½	360	24 to 40 av., 32	.....	1,173	S4S....	Yellow pine (square edged), dense (see rules 3 and 20).
107	46.50	Planking, bottom and side.	5x13¾	5½x14	10,000	24 to 40 av., 32	.....	61,252	1S2E...	Do.
108	46.50	Planking, poop, bridge, and forecastle.	5x13¾	5½x14	400	24 to 40 av., 32	.....	2,450	S1S2E..	Do.
109	32.84	Poop, bridge, and forecastle clamps.	4¾x11¾	5x12	1,000	24 to 40 av., 32	.....	5,000	S4S.....	Yellow pine, dense merchantable.
110	37.02	Planking, bottom and side.	5x9¾	5½x10	5,800	24 to 40 av., 32	.....	25,374	S1S2E..	Yellow pine (square edged), dense (see rules 3 and 20).
111	35.20	.....do.....	5x8¾	5½x9	5,800	24 to 40 av., 32	.....	22,536	S1S2E..	Do.
112	34.20	.....do.....	5x7¾	5½x8	4,000	24 to 40 av., 32	.....	14,002	S1S2E..	Do.
113	29.20	Poop, bridge, and forecastle decks, shelf.	4¾x7¾	5x8	650	24 to 40 av., 32	.....	2,166	S4S.....	Yellow pine, dense merchantable.
114	22.81	Sills and plates...	4¾x4¾	5x5	400	20 to 30 av., 24	.....	833	S4S.....	Do
115	37.02	Planking, bulwarks.	4x9½	4½x10	400	24 to 40 av., 32	.....	1,416	S1S2E..	Yellow pine (square edged), dense (see rules 3 and 20).
116	31.02	Shaft tunnel.....	3¾x9¾	4x10	800	24 to 40 av., 32	.....	2,667	S4S.....	Yellow pine, dense merchantable.
117	27.37	Ends of erections, bulkheads.	3¾x7¾	4x8	2,000	20 to 40 av., 26	.....	5,333	S4S.....	Do.
118	36.94	Planking, bulwarks.	4x7½	4½x8	700	24 to 40 av., 32	.....	1,985	S1S2E..	Yellow pine (square edged), dense (see rules 3 and 20).
119	22.81	Sills and plates...	3¾x5¾	4x6	350	20 to 30 av., 24	.....	700	S4S.....	Yellow pine, dense merchantable.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Item price.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of feet.	Gross footage.	Finish.	Species and grade.
			Inches.	*Inches.*		*Feet*		*Ft.b.m.*		
120	$24.64	Studding	3¾x3¾	4x4	.....	7	64	597	S4S	Yellow pine dense merchantable.
121	27.37	.....do	3¾x3¾	4x4	.....	28	60	2,240	S4S	Do.
122	56.50	Upper decking	.....	4¼x4¼	42,000	16 and up, av., 26	.....	63,219	Rough	Yellow pine square edged), dense (see rule 3).
123	56.50	Decking in way of tanks.	.....	4¼x4¼	2,000	16 and up, av., 26	.....	3,010	Rough	Do.
124	27.37	Hatch covers	2¾x7¾ to 15¾	3x8 to 16 av., 12	2,400	14 and up.	.....	7,200	S4S	Yellow pine, dense merchantable.
125	45.00	Timber for pointers and riders.	3¾x13¾	4x14	1,500	24 to 40 av., 32	.....	7,000	S4S	Do.
126	27.37	Cross spalls	.....	3x8	.....	24	400	19,200	Rough	Do.
127A	31.00	Bulkheads	2¾x7¾	3x8	4,000	20 to 40 av., 32	.....	8,000	S4S	Yellow pine (square edged), able.
127B	38.20	.....do	9¾x11¾	10x12	.....	42	53	22,260	S4S	Merchant, dense merchantable.
127C	38.20	.....do	9¾x11¾	10x12	.....	40	9	3,600	S4S	Do.
127D	27.36	.....do	9¾x11¾	10x12	.....	24	1	240	S4S	Do.
127E	24.63	.....do	9¾x11¾	10x12	.....	20	17	3,400	S4S	Do.
127F	24.63	.....do	9¾x11¾	10x12	.....	18	14	2,520	S4S	Do.
127G	24.63	.....do	9¾x11¾	10x12	.....	16	14	2,240	S4S	Do.
128	27.37	Deck carlings	2¾x5¾	3x6	.....	17	10	255	S5S	Do.
129	27.37	.....do	2¾x5¾	3x6	.....	24	56	2,016	S4S	Do.
130	36.50	Bridge, poop, and forecastle ceiling.	2¾x5¾	3x6	2,000	20 to 40 Av., 30	.....	3,000	S4S	Yellow pine ((square edged), dense merchantable.
131	27.37	Upper house carlings.	2¾x4¾	3x5	.....	20	60	1,500	S4S	Yellow pine, dense merchantable.
132	27.37	Sills and plates	2¾x4¾	3x5	100	20 to 30 Av., 24	.....	125	S4S	Do.
133	27.37	Pilot-house carlings.	2¾x3¾	3x4	.....	16	15	240	S4S	Do.
134A	65.62	Planking, poop, bridge, forecastle, and bulwark.	3¼x7¼	4x8	600	24 to 40 Av., 32	.....	1,600	S4S	Yellow pine square edged), dense (see rule 3).
134B	65.62	.....do	3¼x6¼	4x7	814	24 to 40 Av., 32	.....	1,900	S4S	Do.
134C	65.62	.....do	3¼x5¼	4x6	3,900	24 to 40 Av., 32	.....	7,800	S4S	Do.
135	27.37	Studding	2¾x2¾	3x3	.....	7	29	152	S4S	Yellow pine, dense merchantable.
136	65.62	Poop, bridge, and forecastle decking.	.....	3¼x3¼	28,000	16 and up. Av., 26	.....	24,646	Rough	Yellow pine (square edged), dense (see rule 3).
137	23.72	Engine and boiler hatch planking.	1¾x5¾	2x6	1,800	12 to 24 Av., 16	.....	1,800	S4S	Yellow pine (square edged), dense merchantable.
138	25.72	Bridge house and aft house planking.	1¾x5¾	2x6	4,500	20 to 30 Av., 24	.....	4,500	S4S	Do.
139	25.72	Coal chute	1¾x5¾	2x6	450	20 to 30 Av., 24	.....	450	S4S	Yellow pine dense merchantable.
140	.....	(Omitted.)								
141	30.11	Coal bunkers	1 1/16x5¾	1¼x6	[1] 4,000	12 and up.	.....	6,768	D. & M.	Yellow pine, No. 1 common.
142	50.19	House decking	1 1/16x3¼	1¼x4	[1] 6,000	12 and up.	.....	8,910	S2SCM.	Yellow pine, A edge grain flooring.
143	36.50	House sheathing, outside.	¼x5¾	1x6	[1] 2,000	12 and up.	.....	2,250	D. & M.	Yellow pine, A finish.
144	36.50	House sheathing, inside.	¼x5¾	1x6	[1] 6,000	12 and up.	.....	6,750	D. & M.	Do.

[1] Square feet.

Total gross footage of yellow pine, 1,544,157.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Item prices.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
			Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
145	.....	Rudder stock	.....	20x20	.....	30	1	1,000	Rough.	White oak, all heart, highest structural grade
146	.....	Rudder post	.....	16x18	.....	34	1	816	Rough.	White oak, selected structural.
147	.....	Sternpost	.....	14x20	.....	30	4	2,800	Rough.	Do.
148	.....	Shaft log	.....	14x18	.....	12	4	1,008	Rough.	Do.
149	.....	Horn timbers	.....	12x24	.....	34	2	1,632	Rough.	Do.
150	.....	Forecastle and poop deck chock rails.	.....	6x8	180	12 and up.	.....	720	Rough.	Do.
151	.....	Keel shoe	.....	3x16	.....	20	14	1,120	Rough.	Do.
152	.....	Steam grips	.....	16x36	.....	11	1	528	Rough.	Do.
153 to 158	.....	Knees. (See detail plan of knees with schedule accompanying the sketches of the knees.)	.....	.....	.....	.....	.....	.....	.....	Hatchmatack or tamarack, white oak, live oak, cypress, spruce, white cedar, western red cedar, Douglas fir, high-grade juniper.
		Treenails	[1] 1⅜x36	.....	.....	.....	7,500	.....	.....	Black or yellow locust, iron bark bois de arc, or live oak.
		Do	[1] 1rx32	.....	.....	.....	12,500	.....	.....	Do.
		Do	[1] 1¼x26	.....	.....	.....	4,500	.....	.....	Do.

[1] Inches diameter by length in inches.

Total gross footage of white oak, 9,624.

The American Bureau of Shipping or their local surveyors should be consulted as to the necessary finished diameters of the different treenails.

Mold material: 4,000 linear feet of white pine or select common cypress, 1 by 12 inches, in lengths of 14 to 16 feet, surfaced two sides.

BILLS FOR LUMBER SHIPMENTS.

NOVEMBER 1, 1917.

1. All bills against the Emergency Fleet Corporation must be made on their special voucher forms, supplies of which will be furnished upon request. When ordering supplies of voucher forms state the number of carloads that you will have to ship. Forms may be obtained from the New Orleans office of the lumber department.

2. Never invoice more than one shipment of lumber on a voucher form. The word "shipment" shall be understood to mean the quantity covered by one bill of lading. Be careful to fill out the blanks on the voucher with all information that they call for. You may not have the contract number, but all the other data should be given. It will be noted that a blank is provided for your invoice number. Please use this, as it will help you to identify the payments when checks are sent to you. Show car numbers in every case. Any carbon copies of vouchers that you may desire for your own use should be made on plain paper, as all four copies of the voucher are required by the Emergency Fleet Corporation.

3. Whenever possible, the itemized lumber bill should be shown on the face of the voucher, but if the voucher is not large enough for this purpose simply show on it the total footage, kind of lumber, and total value, also the car number or car numbers, together with a notation reading "As per details on certified tally sheet attached." On the tally sheet, when it is used in this way, the price and value of each item should be shown, and also the total value.

4. In cases where invoices are not made at the mills, the inspector's signature may be obtained on the tally sheet as outlined above and the tally sheets forwarded with the invoices when the latter are written up on our voucher form. When the inspector's certificate appears on the tally sheet, the words

"See tally sheet" should appear in the blank on the voucher which is provided for the inspector's approval as to quantities and grades.

5. Four copies of the tally sheet on each shipment should be furnished. Three of them, signed by our inspector, should be attached to the voucher and the fourth mailed to the consignee. The tally sheet may be on the shipper's billhead or in any other form that may be convenient to him, provided that it shows the name and address of the shipper and consignee, date of shipment, and car numbers. Tally sheets should always be plainly marked with the words "Tally sheet." When the inspector's approval appears on the tally sheet it should be in the following form:

Approved as to quantities and grades.

_____ _____,

Inspector, Emergency Fleet Corporation.

[Signature should be made with ink or indelible pencil.]

6. In addition to the original and duplicate bill of lading three other copies of each bill of lading should be made, one of which will be for your file. The original bill of lading should be attached to the original voucher and a copy to the pink copy of the voucher. The remaining copy of the bill of lading should be sent to traffic department, United States Shipping Board, 1319 F Street, Washington, D. C.

7. When vouchers have been made up as above, and all footage and price calculations checked, they should be signed by the seller in the blank provided for that purpose. It will be noted that the name of the firm should appear, and the signature of the representative who signs in behalf of the firm.

8. The vouchers, with attached documents, should then be mailed to lumber department, Emergency Fleet Corporation, Suite 430, Audubon Building, New Orleans, La. Here they will be checked, and if found to be correct will be paid immediately from the New Orleans office. Payment will be made before the shipment arrives at destination and is tallied.

9. The Emergency Fleet Corporation is installing a large and competent organization for the sole purpose of facilitating the payment for lumber shipments. If the lumber mills follow instructions, they will get their money quickly. Necessary steps will be taken to insure that there shall be no other cause for delay in payment than failure of the lumber mills to follow instructions.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION TIMBER SCHEDULE AND SPECIFICATIONS FOR STANDARD WOOD STEAMSHIP, PACIFIC COAST, LARGELY DOUGLAS FIR.

GENERAL INFORMATION.

These specifications have been drafted for the information and guidance of lumber manufacturers, contractors, and shipbuilders, and constitute the official schedule of timbers to be used in the construction of wooden vessels on the Pacific coast.

The purchase and inspection of lumber under this schedule will be conducted by the Emergency Fleet Corporation or under its direction. Inspections will be made at the mills where lumber is manufactured.

Purchases of the Douglas-fir items called for will be made only in complete units of one ship, and will be awarded to mills or groups of mills undertaking to furnish complete units. Offers to furnish a partial list of Douglas-fir items will not be considered.

Approved May 20, 1917.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
Maj. Gen. GEO. W. GOETHALS, *General Manager.*

RULES GOVERNING PACIFIC COAST TIMBER SCHEDULE.

The accompanying lumber schedule is governed strictly by the following rules:

1. Dimensions of timbers in the form to be used in the ship are net, after surfacing. Material must be sawed large enough to surface down to these dimensions. Dimensions and quantities in the rough, in accordance with the usual milling practice, are given separately for the information of manufacturers.

2. The specification of "Selected common" Douglas fir means the following, as quoted from the Standard Schedule of Grading Rules, etc., for Douglas fir and associated species, No. 6, issued by the Pacific Lumber Inspection Bureau, 1912:

"Selected common: This is a grade selected from the grade of No. 1 common and shall consist of lumber free from defects that materially impair the strength of the piece, well manufactured, and suitable for high-class constructional and structural purposes or the purpose for which it is intended, including bridge timbers, floor joists, ship timbers, factories, and warehouses, designed to carry heavy loads, etc."

The following specifications, taken from the same schedule, shall govern timber used for ship plank and decking:

"No. 1 ship plank: Including outboard planking, garboards, wales, clamps, rails, and lumber for similar purposes, shall be firm grain, free from large knots or other defects impairing its use for the purposes intended.

"Will allow small, tight, hard knots when not on face corners or calking seam. Bright sap on face side edges not exceeding one-quarter the width or thickness. Small pitch pockets not extending through the piece. Said defects to be considered in connection with size of piece and its quality otherwise. Must be well sawn.

"Decking: Shall be uniformly sawn, firm grain, and free from knots and defects on one face and calking edges. Flat sizes shall show edge grain on broad face. Will allow pin and small knots on underside and lower part of calking edges. Bright sap, whether green or seasoned, on face side corner not exceeding one-quarter the width or one-third the length."

3. The specifications governing all other grades of Douglas fir are given in the Standard Schedule of Grading Rules issued by the Pacific Lumber Inspection Bureau, 1912.

4. Hardwood items shall be of selected stock, high-grade structural timbers.

5. Knees shall be free from rot, heart or ring shake, large or loose knots, and other defects which would impair their strength for the purpose intended.

6. Treenails shall be of clear all-heart wood, straight grained, and thoroughly air-dried.

Timber schedule for standard wood steamship—Pacific coast.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft.b.m*		
1	Shaft log	30x30	30½x30½	.....	18	1	1,373	S4S	Selected common Douglas fir.
2	Deadwood, forward	20x26	20½x26½	.....	24	1	1,063	S4S	Do.
3	Deadwood, aft	20x26	20½x26½	.....	26	1	1,152	S4S	Do.
4	Deadwood, forward	20x20	20½x20½	.....	20	8	5,468	S4S	Do.
5	Deadwood, aft	20x20	20½x20½	.....	22	8	6,015	S4S	Do.
6	Engine foundation	20x20	20½x20½	.....	28	5	4,785	S4S	Do.
7	.....do	20x20	20½x20½	.....	50	[1] 5	8,544	S4S	Do.
8	Main keelsons	20x20	20½x20½	1,948	.....	[1] 4	66,567	S4S	Do.
9	Keel	20x20	20½x20½	280	.....	4	9,569	S4S	Do.
10	Rudder blade	18x24	18½x24½	.....	20	1	738	S4S	Do.
11	.....do	18x22	18½x22½	.....	26	1	880	S4S	Do.
12	.....do	18x20	18½x20½	.....	26	1	801	S4S	Do.
13	.....do	18x18	18½x18½	.....	20	1	555	S4S	Do.
14	Stem	16x30	16½x30½	.....	50	1	2,018	S4S	Do.
15	Hull end framing	16x24	16½x24	.....	16 and up Av., 24	5	3,900	S2S	Do.
16	Knightheads	16x24	16½x24½	.....	42	2	2,759	S4S	Do.
17	Apron	16x24	16½x24½	.....	48	1	1,576	S4S	Do.
18	Rudder blade	16x16	16½x16½	.....	14	1	308	S4S	Do.
19	Horn timbers	16x16	16 x16	.....	20	2	853	Rough.	Do.
20	Upper deck waterway	15x15	15½x15½	.....	30 and up Av., 40	.....	27,137	S4S	Do.
21	Stern framing	14x20	14½x20	.....	12	34	9,690	S2S	Do.
22	Rudder blade	14x24	14½x24½	.....	24	1	691	S4S	Do.
23	Hull end framing	14x24	14½x24	.....	16 and up av., 24	5	3,420	S2S	Do.
24	Hold beams	14x16	14½x16½	.....	20	2	,772	S4S	Do.
25	.....do	14x16	14½x16½	.....	36	2	1,389	S4S	Do.
26	.....do	14x16	14½x16½	.....	30	2	1,158	S4S	Do.
27	.....do	14x16	14½x16½	.....	40	2	1,544	S4S	Do.
28	Clamp timbers	14x16	14½x16½	680	30 and up av., 40	.....	13,124	S4S	Do.
29	Hold beams	14x16	14½x16½	.....	42	2	1,621	S4S	Do.
30	.....do	14x16	14½x16½	.....	44	46	39,057	S4S	Do.

[1] Number of pieces in each course.

Timber schedule for standard wood steamship—Pacific coast—Continued.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade
		Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
31	Hatch coamings and girders.	14x14	14¼x14¼	1,300	.....	.....	22,059	S4S....	Selected common Douglas fir.
32	Hatch coamings and girder timbers.	14x14	14¼x14¼	.....	16	8	2,166	S4S....	Do.
33	Hatch strongbacks...	14x14	14¼x14¼	.....	17	2	575	S4S....	Do.
34	.....do.....	14x14	14¼x14¼	.....	21	1	355	S4S....	Do.
35	Stanchions.....	14x14	14¼x14¼	.....	24	68	27,616	S4S....	Do.
36	Hatch strongback....	14x14	14¼x14¼	.....	25	1	423	S4S....	Do.
37	Shelf timbers.....	14x14	14¼x14¼	1,400	30 and up av., 40	.....	23,695	S4S....	Do.
38	Clamp timbers.....	14x14	14¼x14¼	2,400	30 and up av., 40	.....	40,620	S4S....	Do.
39	Bilge ceiling.....	14x14	14¼x14¼	2,000	30 and up av., 40	.....	33,850	S1S2E..	Do.
40	Flitch timber frames .	12x32	12¼x32	.....	10	100	32,067	S2S....	Do.
41	.....do.....	12x30	12¼x30	.....	10	16	4,900	S2S....	Do.
42	.....do.....	12x30	12¼x30	.....	10	100	30,625	S2S....	Do.
43	.....do.....	12x30	12¼x30	.....	16	12	5,880	S2S....	Do.
44	Stern framing.....	12x30	12¼x30	.....	18	34	18,742	S2S....	Do.
45	Flitch timber frames..	12x30	12¼x30	.....	20	16	9,800	S2S....	Do.
46	.....do.....	12x30	12¼x30	.....	24	12	8,820	S2S....	Do.
47	.....do.....	12x28	12¼x28	.....	12	16	5,488	S2S....	Do.
48	.....do.....	12x28	12¼x28	.....	16	50	22,867	S2S....	Do.
49	.....do.....	12x28	12¼x28	.....	16	50	25,611	S2S....	Do.
50	.....do.....	12x26	12¼x26	.....	10	100	26,511	S2S....	Do.
51	.....do.....	12x26	12¼x26	.....	16	56	23,781	S2S....	Do.
52	.....do.....	12x26	12¼x26	.....	16	50	21,233	S2S....	Do.
53	.....do.....	12x26	12¼x26	.....	28	20	14,863	S2S....	Do.
54	.....do.....	12x26	12¼x26	.....	28	16	11,891	S2S....	Do.
55	.....do.....	12x26	12¼x26	.....	30	80	63,700	S2S....	Do.
56	.....do.....	12x24	12¼x24	.....	16	56	21,952	S2S....	Do.
57	.....do.....	12x24	12¼x24	.....	16	50	19,600	S2S....	Do.
58	Hull end framing.....	12x24	12¼x24	.....	16 and up, av. 24.	5	2,940	S2S....	Do.
59	Flitch timber frames..	12x20	12¼x20	.....	12	50	12,250	S2S....	Do.
60	.....do.....	12x20	12¼x20	.....	16	56	18,293	S2S....	Do.
61	Upper deck beams....	12x18	12¼x18¼	.....	40	3	2,236	S1S2E .	Do.
62	.....do.....	12x18	12¼x18¼	.....	44	40	32,789	S1S2E .	Do.
63	.....do.....	12x18	12¼x18¼	.....	60	1	1,118	S1S2E .	Do.
64	.....do.....	12x18	12¼x18¼	.....	66	2	2,459	S1S2E .	Do.
65	.....do.....	12x18	12¼x18¼	.....	74	2	2,757	S1S2E .	Do.
66	.....do.....	12x18	12¼x18¼	.....	76	2	2,832	S1S2E .	Do.
67	.....do.....	12x18	12¼x18¼	.....	86	2	3,204	S1S2E .	Do.
68	Flitch timber frames..	12x16	12¼x16	.....	12	56	10,976	S2S....	Do.
69	.....do.....	12x16	12¼x16	.....	12	50	9,800	S2S....	Do.
70	.....do.....	12x16	12¼x16	.....	14	80	18,293	S2S....	Do.
71	Upper deck short beams.	12x16	12¼x16¼	.....	16	66	17,518	S1S2E .	Do.
72	Girder keelsons.....	12x16	12¼x16¼	.....	65	15	16,177	S4S....	Do.
73	Flitch timber frames..	12x14	12¼x14	.....	16	80	18,293	S2S....	Do.
74	Shelf timber.....	12x14	12¼x14¼	700	30 and up av., 40	.....	10,185	S4S....	Do.
75	Bilge ceiling.....	12x14	12¼x14¼	3,000	30 and up av., 40	.....	43,650	S1S2E .	Do.
76	Flitch timber frames..	12x12	12¼x12	.....	16	80	15,680	S2S....	Do.
77	Hatch coamings and girder timbers.	12x12	12¼x12¼	.....	16	8	1,601	S4S....	Do.
78	Shelf timbers.....	12x12	12¼x12¼	2,200	30 and up av., 40	.....	27,518	S4S....	Do.
79	Solid floors under engine bed.	10x26	10¼x26¼	.....	14	10	3,139	S4S....	Do.
80	Hull end framing.....	10x24	10¼x24	.....	16 and up av., 24	5	2,460	S2S....	Do.
81	Planking, garboards..	10x18	10¼x18¼	600	5 pieces each streak	.....	9,353	S1S2E .	Selected common Douglas fir (square edged).
82	Hatch strongbacks...	10x12	10¼x12¼	.....	17	4	712	S4S....	Selected common Douglas fir.
83	Headers.....	10x12	10¼x12¼	.....	20	4	837	S4S....	Do.
84	Hatch strongbacks...	10x12	10¼x12¼	.....	21	2	439	S4S....	Do.
85	.....do.....	10x12	10¼x12¼	.....	25	2	523	S4S....	Do.
86	Shelf timbers.....	10x12	10¼x12¼	2,000	30 and up av., 40	.....	20,933	S4S....	Do.
87	Side ceiling and girder timbers.	10x12	10¼x12¼	8,000	...do....	.....	83,733	S1S2E .	Do.
88	Hatch coamings.....	10x10	10¼x10¼	.....	42	8	2,942	S4S....	Do.

Timber schedule for standard wood steamship—Pacific coast—Continued.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
89	Poop bridge and forecastle deck beams.	10x10	10¼x10¼	.....	45	6	2,364	S1S2E .	Selected common Douglas fir.
90	Forecastle and poop plank sheer.	8x26	8¼x26¼	.....	20	14	5,053	S4S....	Do.
91	Planking, first streak.	8x18	8¼x18¼	600	5 pieces each streak	.....	7,528	S1S2E .	Selected common Douglas fir (square edged).
92	Engine foundation packing timbers.	8x16	8¼x16¼	.....	30	15	5,029	S4S...	Selected common Douglas fir.
93	Floor ceiling.....	8x12	8¼x12¼	6,700	30 and up av., 40	.....	56,447	S1S2E .	Do.
94	Bulkhead studding...	8x12	8¼x12¼	.....	52	60	26,276	S4S....	Do.
95	Poop bridge and forecastle deck plank sheer.	8x14	8¼x14¼	300	30 and up	.....	2,940	S4S....	Do.
96	Sills and plates.....	8x10	8¼x10¼	200	20 and up av., 30	.....	1,409	S4S....	Do.
97	Sills.....	8x 8	8¼x 8¼	.....	20	6	631	S4S....	Do.
98	Lock streak.....	7x12	7¼x12¼	.....	40	15	4,441	S4S....	Do.
99	Poop bridge and forecastle deck beams.	7x10	7¼x10¼	.....	17	16	1,684	S1S2E .	Do.
100	.....do.....	7x10	7¼x10¼	.....	24	8	1,239	S1S2E .	Do.
101	.....do.....	7x10	7¼x10¼	.....	33	15	3,530	S1S2E .	Do.
102	.....do.....	7x10	7¼x10¼	.....	45	18	5,016	S1S2E .	Do.
103	Planking main rail...	6x19	6¼x19¼	500	30 and up av., 40	.....	5,013	S1S2E .	Selected common Douglas fir (square edged).
104	Planking second streak.	6x18	6¼x18¼	600	5 pieces each streak	.....	5,703	S1S2E .	Do.
105	Sills and plates.....	6x10	6¼x10¼	250	20 and up av., 30	.....	1,335	S4S....	Selected common Douglas fir.
106	Planking, bilge.....	6x10	6¼x10¼	5,600	30 and up av., 40	.....	29,896	S1S2E .	Do.
107	Shaft tunnel.....	6x10	6¼x10¼	1,600	30 to 60 av., 40	.....	8,547	S4S....	Selected common Douglas fir (square edged).
108	Planking, side.....	6x 9	6¼x 9¼	5,600	30 and up av., 40	.....	26,979	S1S2E .	Do.
109	Studding.....	6x 8	6¼x 8¼	.....	8	60	2,063	S4S....	Selected common Douglas fir.
110	Chock rails.....	6x 8	6¼x 8	175	20 to 30	.....	729	S2S....	Do.
111	Sills and plates.....	6x 8	6¼x 8¼	250	20 and up av., 30	.....	1,074	S4S....	Do.
112	Poop, bridge, and forecastle deck shelf.	6x 8	6¼x 8¼	300	30 and up	.....	1,290	S4S....	Do.
113	Poop, bridge, and forecastle deck lock streak.	6x 8	6¼x 8¼	300	30 and up	.....	1,290	S4S....	Do.
114	Studding.....	6x 6	6¼x 6¼	.....	7	40	907	S4S....	Do.
115	Sills and plates.....	6x 6	6¼x 6¼	200	20 and up av., 30	.....	651	S4S....	Do.
116	Planking, bead streak.	6x 6	6¼x 6¼	360	30 and up av., 40	.....	1,172	S1S2E	Selected common Douglas fir (square edged).
117	Planking, bottom and side.	5x18	5¼x18¼	8,000	30 and up av., 40	.....	63,875	S1S2E .	Do.
118	Planking, poop, bridge, and forecastle.	5x14	5¼x14¼	400	30 and up av., 40	.....	2,494	S1S2E .	Do.
119	Poop, bridge, and forecastle deck clamps.	5x12	5¼x12¼	900	30 and up	.....	4,822	S4S....	Selected common Douglas fir.
120	Planking, bottom and side.	5x10	5¼x10¼	5,800	30 and up av., 40	.....	26,009	S1S2E .	Selected common Douglas fir (square edged).
121	.....do.....	5x 9	5¼x 9¼	4,000	30 and up av., 40	.....	16,188	S1S2E .	Do.
122	.....do.....	5x 8	5¼x 8¼	3,000	30 and up av., 40	.....	10,828	S1S2E .	Do.
123	Poop, bridge, and forecastle deck shelf.	5x 8	5¼x 8¼	600	30 and up	.....	2,165	S4S....	Selected common Douglas fir.
124	Sills and plates.....	5x 5	5¼x 5¼	400	20 and up av., 30	.....	919	S4S....	Do.
125	Planking, poop, bridge, and forecastle.	4x10	4¼x10¼	400	30 and up av., 40	.....	1,452	S1S2E .	Selected common Douglas fir (square edged).

Timber schedule for standard wood steamship—Pacific coast—Continued.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
126	Shaft tunnel	4x10	4½x10½	860	30 and up av., 40		2,907	S4S	Selected common Douglas fir.
127	Ends of erections bulkheads.	4x 8	4½x 8½	2,000	20 and up av., 30		5,844	S4S	Selected common Douglas fir (square edged).
128	Planking, poop, bridge, and forecastle.	4x 8	4½x 8½	700	30 and up av., 40		2,045	S1S2E	Do.
129	Sills and plates	4x 6	4½x 6½	350	20 and up av., 30		775	S4S	Selected common Douglas fir.
130	Studding	4x 4	4½x 4½	677	7	65	677	S4S	Do.
131	do	4x 4	4½x 4		28	60	2,380	S2S	Do.
132	Deep tank deck plank.	4x 4	4½x 4½	8,000	20 and up av., 30		12,042	S4S	Selected common Douglas fir (square edged).
133	Upper deck plank	4x 4	4½x 4½	42,000	20 and up av., 30		63,219	S4S	Do.
134	Hatch covers	3x 8 to 16 Av., 12	3½x 8½ to 16½ Av., 12	2,400			7,962	S4S	Do.
135	Timber for pointers, breast headings.	3x12	3½x12		30	20	1,950	S2S	Selected common Douglas fir.
136	Cross spalls	3x 8	3 x 8		24	600	19,200	Rough	Do.
137	Bulkheads	3x 8	3½x 8½	14,000	20 and up av., 30		31,261	S4S	Selected common Douglas fir (square edged).
138	Bridge-house carlings.	3x 6	3½x 6½		17	10	288	S4S	Selected common Douglas fir.
139	do	3x 6	3½x 6½		24	56	2,275	S4S	Do.
140	Bridge, poop, and forecastle ceiling.	3x 6	3½x 6½	2,000	20 and up av., 30		3,335	S1S2E	Do.
141	Upper bridge house carlings.	3x 5	3½x 5½		20	60	1,706	S4S	Do.
142	Sills and plates	3x 5	3½x 5½	100	20 and up av., 30		142	S4S	Do.
143	Pilot-house carlings	3x 4	3½x 4½		16	15	276	S4S	Do.
144	Planking, bulwarks	3x 4	3½x 4½	2,000	30 and up av., 40		2,303	S1S2E	Selected common Douglas fir (square edged).
145	Studding	3x 3	3½x 3½		7	29	176	S4S	Selected common Douglas fir.
146	Poop, bridge, and forecastle deck plank.	3x 3	3½x 3½	28,000	20 and up av., 30		25,526	S4S	Selected common Douglas fir (square edged).
147	Engine and boiler hatch planking.	2x 8	2½x 8½	1,200	12 to 24 av., 16		1,856	S4S	Do.
148	Sills and plates	2x 8	2½x 8½	450	20 and up av., 30		696	S4S	Selected common Douglas fir.
149	Bridge and aft house planking.	2x 8	2½x 8½	300	20 and up av., 30		464	S4S	Selected common Douglas fir (square edged).
150	Blocks	2x 6	2½x 6½	600	6 and up		703	S4S	Selected common Douglas fir.
151	Coal bunkers	[1]1⅛x 5½	1½x 6	[2]1,000	12 and up random lengths.		1,692	D.& M.	No. 1 common fir.
152	House decking	[1]1⅛x 3½	1½x 4	[2]6,000	12 and up random lengths.		8,910	D.& M	No. 2 clear V. G. flooring fir.
153	House sheathing, inside.	[1] ⅞x 5½	1x 6	[2]6,000	12 and up random lengths.		6,750	D.& M.	Selected common fir.
154	House sheathing, outside.	[1] ⅞x 5½	1x 6	[2]2,000	12 and up random lengths.		2,250	D.& M.	Do.
155	Mold material	⅞x12	1x12	1,000	14 to 16		1,000	S2S	No. 2 clear finish fir.

[1] Tongued and grooved. [2] Square feet.

Timber schedule for standard wood steamship—Pacific coast—Continued.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft.b.m.*		
156	Sternpost	24x30	24x30	.....	40	2	4,800	Rough.	Gum or ironbark, selected structural.
157	Rudderpost	20x20	20x20	.....	40	1	1,333	Rough.	Do.
158	Rudderstock	18x18	18½x18½	.....	30	1	832	S4S	Do.
159	Keel shoe	3x20	3½x20½	.....	28	10	1,536	S4S	Do.
160	Deadwood knees	[1] 20	.....	.....	Arms 4 and 8	2	.....	S2S	Douglas fir or western red cedar.
161	Knees	[1] 12	.....	.....	Arms 8 and up.	4	.....	S2S	Do.
162	Hull lodging knees	[1] 9	.....	.....	Arms 6 to 8	58	.....	S2S	Do.
163	Stanchion knees	[1] 8	.....	.....	Arms 4 to 6	80	.....	S2S	Do.
164	Poop, bridge, and forecastle hanging knees.	[1] 6	.....	.....	Arms 4 to 6.	40	.....	S2S	Do.
165	Bridge hanging knees.	[1] 4	.....	.....	Arms 4 to 6.	20	.....	S2S	Do.
166	Trenails	[2] 1⅜	.....	.....	40 inches	16,000	.....	.....	White oak, black locust, or other approved hardwoods.
167	.....do	[2] 1¼	.....	.....	26 inches	4,000	.....	.....	Do.

[1] Thick. [2] Diameter.

Total Douglas fir, excluding knees	1,684,223
Total hardwood, excluding trenails	8,501
Total all woods, excluding knees and trenails	1,692,734

AMENDMENTS TO SPECIFICATIONS NO. 2 OF CERTAIN ITEMS OF TIMBER SCHEDULE FOR STANDARD WOOD STEAMSHIP OF DOUGLAS FIR TYPE, PUBLISHED MAY 20, 1917.

Trenails.—Trenails will be of the following finished sizes and quantities instead of the specifications given on page 16 of the schedule of May 20, 1917:

Size.	Quantity.
Inches.	
1¼ by 26	4,500
1⅜ by 32	12,500
1⅜ by 36	7,500

Firms which do not have facilities for manufacturing finished trenails, but which wish to supply rough oak lumber from which trenails may be made by shipbuilding firms, may find the following suggestions helpful:

Memorandum Regarding Quantity of Oak Lumber Required for the Manufacture of Trenails.

Item No. 1, finished size, 1¼ by 26 inches; quantity, 4,500 pieces. Can be manufactured from 1½ by 1½ by 26 inches rough dimension stock. Amount of lumber in each piece is 0.405 board foot.

Item No. 2, finished; size, 1⅜ by 32 inches; quantity, 12,500 pieces. Can be made from 1½ by 1½ by 32 inches dimension stock, each piece containing ½ board foot.

Item No. 3, finished; size, 1⅜ by 36 inches; quantity, 7,500 pieces. Can be made from 1½ by 1½ by 36 inches rough dimension stock, each piece containing 0.562 board foot.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—TIMBER SCHEDULE AND SPECIFICATIONS FOR STANDARD WOOD STEAMSHIP, GULF AND ATLANTIC COAST, LARGELY SOUTHERN YELLOW PINE.

[Revised July 9, 1917.]

GENERAL INFORMATION.

These specimens have been drafted for the information and guidance of lumber manufacturers, contractors, and shipbuilders, and constitute the official schedule of timbers to be used in the construction of wooden vessels on the Gulf and Atlantic coasts.

The purchase and inspection of lumber under this schedule will be conducted by the Emergency Fleet Corporation or under its direction. Inspections will be made at the mills where lumber is manufactured.

Purchases of the yellow-pine items called for will be made only in complete units of one or more ships, and will be awarded to mills or groups of mills undertaking to furnish complete units. Offers to furnish a partial list of yellow-pine items will not be considered.

White-oak flitch timber frames may be substituted for yellow pine in not to exceed 20 per cent of these items.

Approved May 20, 1917.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
GEORGE W. GOETHALS, *General Manager.*

RULES GOVERNING TIMBER SCHEDULE.

The accompanying lumber schedule is governed strictly by the following rules:

1. Dimensions of timbers in the form to be used in the ship are net, after surfacing. Material must be sawed large enough to surface down to these dimensions. Dimensions and quantities in the rough, in accordance with the usual milling practice, are given separately for the information of manufacturers.

2. The specification of "Dense merchantable" yellow pine means the following, as quoted from the January 1, 1917, grading rules issued by the Southern Pine Association; except that the wane rule shall not apply to decking and planking, which must be square edged:

"All merchantable timbers shall be well manufactured and shall be free from defects such as injurious ring and round shakes and through shakes that extend to the surface, unsound and loose knots, and knots in groups that will materially impair the strength. Seasoning checks and sap stain shall not be considered defects.

"Sizes under 9 inches on the largest dimension shall show two-thirds or more heart surface on one of the wide faces; sizes 9 inches and over on the largest dimension shall show two-thirds or more heart on both of the wide faces. When sticks are square the face showing the most heart shall govern the inspection on sizes under 9 inches and the two faces showing the most heart shall govern the inspection when 9 inches and over. Heart showing the full length, even if not two-thirds of the area as above, shall meet the requirements of this quality.

"Wane not exceeding one-eighth of the dimension of the face and one-quarter of the length of the piece on one corner, or the equivalent on two or more corners on not to exceed 10 per cent of the pieces, shall be admitted.

"Dense southern yellow pine shall show on either end an average of at least six annual rings per inch and at least one-third summer wood, or else the greater number of the rings shall show at least one-third summer wood, all as measured over the third, fourth, and fifth inches of a radial line from the pith. Wide-ringed material excluded by this rule will be acceptable, provided that the amount of summer wood as above measured shall be at least one-half.

"The contrast in color between summer wood and spring wood shall be sharp and the summer wood shall be dark in color, except in pieces having considerably above the minimum requirement for summer wood.

"In cases where timbers do not contain the pith, and it is impossible to locate it with any degree of accuracy, the same inspection shall be made over 8 inches on an approximate radial line beginning at the edge nearest the pith

in timbers over 3 inches in thickness and on the second inch (on the piece) nearest to the pith in timbers 3 inches or less in thickness.

"In dimension material containing the pith but not a 5-inch radial line, which is less than 2 by 8 inches in section or less than 8 inches in width, that does not show over 16 square inches on the cross section, the inspection shall apply to the second inch from the pith. In larger material that does not show a 5-inch radial line the inspection shall apply to the 3 inches farthest from the pith.

"The radial line chosen shall be representative. In case of disagreement between purchaser and seller, the average summer wood and number of rings shall be the average of the two radial lines chosen."

3. The specifications governing yellow pine grades No. 1 common, A edge grain flooring, and A finish are given in the Standard Specifications for Grades of Southern Yellow Pine Lumber issued by the Southern Pine Association April 1, 1917.

4. Cypress flitches shall be equivalent in grade to No. 1 common. The specifications governing cypress grades are given in the Standard Grades and Classifications of the Southern Cypress Manufacturers' Association, edition of January 1, 1917.

5. Oak items, unless otherwise specified, shall be selected stock from the grade of construction oak timbers. The specifications governing oak grades are given in Association Standard Grades issued by the Hardwood Manufacturers' Association of the United States October 1, 1915.

6. Knees shall be free from rot, heart or ring shake, large or loose knots, and other defects which would impair their strength for the purpose intended. They should conform with the following dimensions and be natural crooks:

Thickness.	Length of long arm.	Length of short arm.
Inches.	*Feet.*	*Feet.*
16	6 and up.	3 and up.
12	6 and up.	3 and up.
9	5 and up.	3 and up.
8	4½ and up.	2½ and up.
6	4 and up.	2½ and up.
4	3½ and up.	2 and up.

7. Treenails shall be of clear all-heart wood, straight grained, and thoroughly air dried.

Timber schedule for standard wood steamship—Gulf and Atlantic coast.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		In.	*In.*		*Ft.*		*Ft.b.m.*		
1	Rudder blade	17¾x18	18x18		20	1	540	S2S	Yellow pine, dense merchantable.
2	do	17¾x18	18x18		26	1	702	S2S	Do.
3	Hull end framing		16x24	120	16 to 32 Av., 24	5	3,840	Rough.	Do.
4	Knightheads		16x24		42	2	2,688	Rough.	Do.
5	Stem		16x20		44	1	1,173	Rough.	Do.
6	Rudder blade	15¾x16	16x16		26	1	554	S2S	Do.
7	Apron		16x16		44	2	1,877	Rough.	Do.
8	Rudder blade	14 x23¾	14x24		24	1	672	S1E	Do.
9	Hull end framing		14x24	120	16 to 32 Av., 24	5	3,360	Rough.	Do.
10	Forward deadwood	13¾x15¾	14x16		20	9	3,360	S4S	Do.
11	Hold beams	13¾x15¾	14x16		20	2	717	S4S	Do.
12	After deadwood	13¾x15¾	14x16		22	9	3,696	S4S	Do.
13	Hold beams	13¾x15¾	14x16		30	2	1,120	S4S	Do.
14	do	13¾x15¾	14x16		36	2	1,344	S4S	Do.
15	do	13¾x15¾	14x16		40	2	1,493	S4S	Do.
16	do	13¾x15¾	14x16		42	2	1,568	S4S	Do.
17	do	13¾x15¾	14x16		44	46	37,730	S4S	Do.
18	Keel		14x16		44	3	2,646	Rough.	Do.
19	do		14x16		48	4	3,584	Rough.	Do.
20	Stern framing		14x14		10	34	5,553	Rough.	Do.
21	Rudder blade	13¾x14	14x14		14	1	229	S2S	Do.

***Timber schedule for standard wood steamship—Gulf and Atlantic coast*—Contd.**

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		In.	*In.*		*Ft.*		*Ft.b.m.*		
22	Girder timbers and hatch coamings.	13¾x13¾	14x14	.....	16	8	2,091	S4S....	Yellow pine, dense merchantable.
23	Hatch strongbacks....	13¾x13¾	14x14	.....	17	2	555	S4S....	Do.
24	Stern framing.....	.....	14x14	.....	18	34	9,996	Rough.	Do.
25	Rudder blade.....	13¾x14	14x14	.....	20	1	326	S2S....	Do.
26	Hatch strongback.....	13¾x13¾	14x14	.....	21	1	343	S4S....	Do.
27	.....do.....	13¾x13¾	14x14	.....	25	1	408	S4S....	Do.
28	Engine foundation keelsons.	13¾x13¾	14x14	.....	28	8	3,659	S4S....	Do.
29	Upper deck waterway.	13¾x13¾	14x14	1,400	24 to 40. av.,32.	.....	22,867	S4S....	Do.
30	Girder timbers and hatch coamings.	13¾x13¾	14x14	1,400	24 to 40. av.,32.	.....	22,867	S4S....	Do.
31	Bilge ceiling.....	.....	14x14	2,000	24 to 40. av.,32.	.....	32,667	Rough.	Do.
32	Clamp timbers.....	13¾x13¾	14x14	3,600	30 to 50. av.,40.	.....	58,800	S4S....	Do.
33	Engine foundation keelsons.	13¾x13¾	14x14	.....	45	8	5,880	S4S....	Do.
34	Main keelsons.....	13¾x13¾	14x14	.....	48	56	43,904	S4S....	Do.
35	Flitch timber frames..	.....	12x24 and up.	.....	6 and up.	100	14,400	Rough.	Yellow pine, dense merchantable;
					9 and up.	200	43,200	Rough.	Douglas fir, cypress, or crooked white or live oak.
36	Hull end framing.....	.....	12x24	120	16 to 32 av.,24	5	2,880	Rough.	Yellow pine, dense merchantable.
37	Flitch timber frames..	.....	12x20	.....	14	32	8,960	Rough.	Do.
38	.....do.....	.....	12x20	.....	16	160	51,200	Rough.	Do.
39	.....do.....	.....	12x20	.....	16	90	28,800	Rough.	Do.
40	.....do.....	.....	12x20	.....	16	110	35,200	Rough.	Do.
41	Upper deck beams.....	11¾x18	12x18	.....	26	2	936	S2S....	Do.
42	.....do.....	11¾x18	12x18	.....	26	2	936	S2S....	Do.
43	.....do.....	11¾x18	12x18	.....	30	1	540	S2S....	Do.
44	.....do.....	11¾x18	12x18	.....	32	2	1,152	S2S....	Do.
45	.....do.....	11¾x18	12x18	.....	32	2	1,152	S2S....	Do.
46	.....do.....	11¾x18	12x18	.....	34	2	1,224	S2S....	Do.
47	.....do.....	11¾x18	12x18	.....	36	2	1,296	S2S....	Do.
48	.....do.....	11¾x18	12x18	.....	36	2	1,296	S2S....	Do.
49	.....do.....	11¾x18	12x18	.....	38	2	1,368	S2S....	Do.
50	.....do.....	11¾x18	12x18	.....	40	3	2,160	S2S....	Do.
51	.....do.....	11¾x18	12x18	.....	40	2	1,440	S2S....	Do.
52	.....do.....	11¾x18	12x18	.....	44	40	31,680	S2S....	Do.
53	Flitch timber frames..	.....	12x16	.....	12	110	21,120	Rough.	Do.
54	Upper deck short beams.	11¾x16	12x16	.....	16	66	16,896	S2S....	Do.
55	Flitch timber frames...	.....	12x16	.....	16	110	28,160	Rough.	Do.
56	Bilge ceiling.....	.....	12x14	3,000	24 to 40 Av., 32	.....	42,000	Rough.	Do.
57	Shelf timbers.....	11¾x13¾	12x14	700	30 to 50 Av. 40	.....	9,800	S4S....	Do.
58	Flitch timber frames..	.....	12x12	.....	9	80	8,640	Rough.	Do.
59	Stanchions.....	11¾x11¾	12x12	.....	10	15	1,800	S4S....	Do.
60	Flitch timber frames..	.....	12x12	.....	12	260	37,440	Rough.	Do.
61	Stanchions.....	11¾x11¾	12x12	.....	14	15	2,520	S4S....	Do.
62	Girder timbers and hatch coamings.	11¾x11¾	12x12	.....	16	8	1,536	S4S....	Do.
63	Stanchions.....	11¾x11¾	12x12	.....	24	36	10,368	S4S....	Do.
64	Girder timbers and hatch coamings.	11¾x11¾	12x12	500	24 t 0 Av., 32	.....	6,000	S4S....	Do.
65	Shelf timbers.....	11¾x11¾	12x12	1,800	30 to 50 Av., 40	.....	21,600	S4S....	Do.
66	Flitch timber frames..	.....	12x10	.....	12	80	9,600	Rough.	Do.
67	Hull end framing.....	.....	10x24	120	16 to 32 Av., 24	5	2,400	Rough.	Do.
68	Solid floors under engine bed.	.....	10x22	.....	34	28	17,453	Rough.	Do.
69	Planking garboards....	9¾x13¾	10x14	.....	40	14	6,533	S1S2E.	Yellow pine (square edged), dense merchantable.
70	Girder keelsons.....	9¾x13¾	10x14	.....	45	12	6,300	S4S....	Yellow pine, dense merchantable.
71	Hatch strongbacks.....	9¾x11¾	10x12	.....	17	4	680	S4S....	Do.
72	Headers.....	9¾x11¾	10x12	.....	20	4	800	S4S....	Do.
73	Hatch strongbacks.....	9¾x11¾	10x12	.....	21	2	420	S4S....	Do.
74	.....do.....	9¾x11¾	10x12	.....	25	2	500	S4S....	Do.
75	Side ceiling.....	10 x11¾	10x12	8,000	24 to 40 Av., 32	.....	80,000	S2E....	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		In.	*In.*		*Ft.*		*Ft.b.m.*		
76	Shelf timbers	9¾x11¾	10x12	2,200	30 to 50 Av., 40	.....	22,000	S4S	Yellow pine, dense merchantable.
77	Girder timbers and hatch coamings.	9¾x 9¾	10x10	.....	16	8	1,067	S4S	Do.
78	.....do	9¾x 9¾	10x10	.....	24	8	1,600	S4S	Do.
79	Poop, bridge, and forecastle deck beams.	9¾x 9¾	10x10	.....	45	6	2,250	S4S	Do.
80	Forecastle and poop deck plank-sheer.	7¾x26	8x26	.....	20	14	4,853	S2S	Do.
81	Poop, bridge, and forecastle deck plank-sheer.	7¾x13¾	8x14	320	24 to 40 Av., 32	.....	2,986	S4S	Do.
82	Planking, garboards	7¾x13¾	8x14	560	30 to 40 Av., 35	16	5,226	S1S2E	Do.
83	Girder keelsons	7¾x13¾	8x14	.....	45	20	8,400	S4S	Do.
84	Bulkhead studding	7¾x11¾	8x12	.....	24	40	7,680	S4S	Do.
85	.....do	7¾x11¾	8x12	.....	26	40	8,320	S4S	Do.
86	Engine foundation packing timbers.	7¾x11¾	8x12	.....	30	15	3,600	S1S2E	Do.
87	Floor ceiling	8x11¾	8x12	6,700	24 to 40 Av., 32	.....	53,600	S2E	Do.
88	Sills and plates	7¾x9¾	8x10	200	20 to 30 Av., 24	.....	1,333	S4S	Do.
89	Sills	7¾x7¾	8x8	.....	20	6	640	S4S	Do.
90	Poop, bridge, and forecastle deck beams.	6¾x9¾	7x10	.....	17	16	1,587	S4S	Do.
91	.....do	6¾x9¾	7x10	.....	24	8	1,120	S4S	Do.
92	.....do	6¾x9¾	7x10	.....	38	15	3,325	S4S	Do.
93	.....do	6¾x9¾	7x10	.....	45	18	4,275	S4S	Do.
94	Planking, main rail	5¾x19	6x19	500	24 to 40 Av., 32	.....	4,750	S2S	Yellow pine (square edged), dense merchantable.
95	Planking, garboards	6x13¾	6½x14	560	30 to 40 Av., 35	16	3,616	S1S2E	Do.
96	Sills and plates	5¾x9¾	6x10	250	20 to 30 Av., 24	.....	1,250	S4S	Yellow pine, dense merchantable.
97	Planking, bilge	6x9¾	6½x10	8,000	24 to 40 Av., 32	.....	41,667	S1S2E	Yellow pine (square edged), dense merchantable.
98	Shaft tunnel	5¾x9¾	6x10	1,000	24 to 40 Av., 32	.....	8,000	S4S	Yellow pine, dense merchantable.
99	Planking, topside	6x8¾	6½x9	8,000	24 to 40 Av., 32	.....	37,500	S1S2E	Yellow pine (square edged), dense merchantable.
100	Studding	5¾x7¾	6x8	.....	8	60	1,920	S4S	Yellow pine, dense merchantable.
101	Sills and plates	5¾x7¾	6x8	250	20 to 30 Av., 24	.....	1,000	S4S	Do.
102	Poop, bridge, and forecastle decks, lock streak.	5¾x7¾	6x8	320	24 to 40 Av., 32	.....	1,280	S4S	Do.
103	Poop, bridge, and forecastle decks, shelf.	5¾x7¾	6x8	320	24 to 40 Av., 32	.....	1,280	S4S	Do.
104	Studding	5¾x5¾	6x6	.....	7	40	840	S4S	Do.
105	Sills and plates	5¾x5¾	6x6	200	20 to 30 Av., 24	.....	600	S4S	Do.
106	Planking, bead streak	6x6	6½x6½	360	24 to 40 Av., 32	.....	1,173	S4S	Yellow pine (square edged), dense merchantable.
107	Planking, bottom and side.	5x13¾	5½x14	10,000	24 to 40 Av., 32	.....	61,252	S1S2E	Do.
108	Planking, poop, bridge, and forecastle.	5x13¾	5½x14	400	24 to 40 Av., 32	.....	2,450	S1S2E	Do.
109	Poop, bridge, and forecastle clamps.	4¾x11¾	5x12	1,000	24 to 40 Av., 32	.....	5,000	S4S	Yellow pine, dense merchantable.
110	Planking, bottom and side.	5x9¾	5½x10	5,800	24 to 40 Av., 32	.....	25,374	S1S2E	Yellow pine (square edged), dense merchantable.
111	.....do	5x8¾	5½x9	5,800	24 to 40 Av., 32	.....	22,836	S1S2E	Do.
112	.....do	5x7¾	5½x8	4,000	24 to 40 Av., 32	.....	14,002	S1S2E	Do.
113	Poop, bridge, and forecastle decks, shelf.	4¾x7¾	5x8	650	24 to 40 Av., 32	.....	2,166	S4S	Yellow pine, dense merchantable.
114	Sills and plates	4¾x4¾	5x5	400	20 to 30 Av., 24	.....	833	S4S	Do.
115	Planking, poop, bridge, and forecastle decks.	.....	4½x10	400	24 to 40 Av., 32	.....	1,416	Rough	Yellow pine (square edged), dense merchantable.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		In.	*In.*		*Ft.*		*Ft.b.m.*		
116	Shaft tunnel	3¾x9¾	4x10	800	24 to 40 Av., 32	.....	2,667	S4S	Yellow pine, dense merchantable.
117	Ends of erections, bulkheads.	3¾x7¾	4x8	2,000	20 to 40 Av., 26	.....	5,333	S4S	Do.
118	Planking, poop, bridge, and forecastle decks.	.....	4¼x8	700	24 to 40 Av., 32	.....	1,985	Rough.	Yellow pine (square edged), dense merchantable.
119	Sills and plates	3¾x5¾	4x6	350	20 to 30 Av., 24	.....	700	S4S	Yellow pine, dense merchantable.
120	Studding	3¾x3¾	4x4	.....	7	64	597	S4S	Do.
121	.....do	3¾x3¾	4x4	.....	28	60	2,240	S4S	Do.
122	Upper decking	.....	4¼x4¼	42,000	16 and up. Av., 26	.....	63,219	Rough.	Yellow pine (square edged), dense merchantable.
123	Decking in way of tanks.	.....	4¼x4¼	8,000	16 and up. Av., 26	.....	12,042	Rough.	Do.
124	Hatch covers	2¾x7¾ to 15¾	3x8 to 16 Av., 12	2,400	14 and up.	.....	7,200	S4S	Yellow pine, dense merchantable.
125	Timber for pointers and breasthooks.	.....	3x12	.....	30	20	1,800	Rough.	Do
126	Cross spalls	.....	3x8	.....	24	400	19,200	Rough.	Do.
127	Bulkheads	2¾x7¾	3x8	14,000	20 to 40 Av., 26	.....	28,000	S4S	Yellow pine (square edged), dense merchantable.
128	Deck carlings	2¾x5¾	3x6	.....	17	10	255	S4S	Yellow pine, dense merchantable.
129	.....do	2¾x5¾	3x6	.....	24	56	2,016	S4S	Do.
130	Bridge, poop, and forecastle ceiling.	2¾x5¾	3x6	2,000	20 to 40 Av., 30	.....	3,000	S4S	Yellow pine (square edged), dense merchantable.
131	Upper house carlings	2¾x4¾	3x5	.....	20	60	1,500	S4S	Yellow pine, dense merchantable.
132	Sills and plates	2¾x4¾	3x5	100	20 to 30 Av., 24	.....	125	S4S	Do.
133	Pilot-house carlings	2¾x3¾	3x4	.....	16	15	240	S4S	Do.
134	Planking, bulwark	2¾x3¾	3x4	2,300	24 to 40 Av., 32	.....	2,300	S1S2E	Yellow pine (square edged), dense merchantable.
135	Studding	2¾x2¾	3x3	.....	7	20	152	S4S	Yellow pine, dense merchantable.
136	Poop, bridge, and forecastle decking.	.....	3¼x3¼	28,000	16 and up. Av., 26	.....	24,646	Rough.	Yellow pine (square edged), dense merchantable.
137	Engine and boiler hatch planking.	1¾x7¾	2x8	1,200	12 to 24 Av., 16	.....	1,600	S4S	Do.
138	Bridge house and aft house planking.	1¾x7¾	2x8	300	20 to 30 Av., 24	.....	400	S4S	Do.
139	Sills and plates	1¾x7¾	2x8	450	20 to 30 Av., 24	.....	600	S4S	Yellow pine, dense merchantable.
140	Chocks	1¾x5¾	2x6	600	6 and up.	.....	600	S4S	Do.
141	Coal bunkers	1 5/16x5¼	1½x6	[1] 1,000	12 and up.	.....	1,692	D. & M.	Yellow pine, No. 1 common.
142	House decking	1 1/16x3¼	1¼x4	[1] 6,000	12 and up.	.....	8,910	D. & M.	Yellow pine, A edge grain flooring.
143	House sheathing, outside.	11/16x5¼	1x6	[1] 2,000	12 and up.	.....	2,250	D. & M.	Yellow pine, A finish.
144	House sheathing, inside.	11/16x5¼	1x6	[1] 6,000	12 and up.	.....	6,750	D. & M.	Do.
145	Rudder stock	.....	20x20	.....	30	1	1,000	Rough.	White oak, all heart, highest structural grade.
146	Rudder post	.....	16x18	.....	34	1	816	Rough.	White oak, selected structural.
147	Sternpost	.....	14x24	.....	30	4	3,360	Rough.	Do.
148	Shaft log	.....	14x14	.....	12	4	784	Rough.	Do.
149	Horn timbers	.....	12x24	.....	33	2	1,584	Rough.	Do.
150	Forecastle and poop deck chock rails.	.....	6x8	180	12 and up.	.....	720	Rough.	Do.
151	Keel shoe	.....	3x16	.....	20	24	1,120	Rough.	Do.
152	Mold material	11/16x12	1x12	1,000	14 to 16	.....	1,000	S2S	Cypress, select common.

[1] Square feet.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footages.	Finish.	Species and grade.
		In.	*In.*		*Ft.*		*Ft.b.m.*		
153	Knees, deadwood	[1] 16			3x6	2		S2S	Live or white oak, tamarack, spruce, cypress, or white cedar. (See special specifications).
154	do	[1] 12			See above.	4		S2S	Do.
155	Knees, hull lodging	[1] 9				58		S2S	Do.
156	Knees, hull stanchions.	[1] 8				80		S2S	Do.
157	Knees, bridge poop, and forecastle hanging.	[1] 6				40		S2S	Do.
158	Knees, bridge house hanging.	4			See table on p. 5.	20		S2S	Live or white oak, tamarack, spruce, cypress, or white cedar. (See special specifications.)
	Treenails	[2] 1⅝x36				7,500			White oak or black locust.
	Do	1⅜x32				12,500			
	Do	1¼x26				4,500			Do.

[1] Inches thick. [2] Inches diameter by length in inches.

Total gross footage, excluding knees and treenails, of yellow pine	1,422,153
Total gross footage, excluding knees and treenails, of hardwoods	8,448
Total gross footage, excluding knees and treenails, of cypress	1,008
Total	1,415,769

NOTES.

Items 40 feet long and over and 18 by 18 inches and over may be furnished by the mills either hewn or sawed. If furnished hewn, such items shall run a full quarter inch over the specified size and be square edged.

Items 146, 147, 148, 149, 150, and 151, oak timbers, may be furnished by the mills either hewn or sawed. If furnished hewn they shall run a full quarter inch over the specified size and be square edged.

Any finished timbers in this schedule which shipbuilders may desire to have furnished rough, gross size, may be furnished that way by mutual arrangement with the mills designated to saw the timbers.

Any of the larger sized timbers except the keel, keelsons, flitch timber frames, and stanchions may be furnished in fir if desired, in the same sizes as shown in this schedule; and the keel, keelsons, flitch timber frames, and stanchions may be furnished in fir if increased in size to the dimensions shown in the Pacific coast or fir ship schedule.

Items 35, 37, 38. 39, 40, 53, 55, 58, 60, and 66, flitch timber frames, are all to be 12 inches thick and left with bark edges. Widths as shown in the schedule mean the width measured inside of the mark at the narrowest part of the flitch.

Firms which do not have facilities for manufacturing finished treenails, but which wish to supply rough oak lumber from which treenails may be made by shipbuilding firms, may find the following suggestions helpful:

MEMORANDUM REGARDING QUANTITY OF OAK LUMBER REQUIRED FOR THE MANUFACTURE OF TREENAILS.

Item No. 1, finished, size 1¼ by 26 inches; quantity, 4,500. Can be manufactured from 1½ by 1½ by 26 inches rough-dimension stock. Amount of lumber in each piece is 0.405 board foot.

Item No. 2, finished, size 1⅜ by 32 inches; quantity, 12,500. Can be made from 1½ by 1½ by 32 inches rough-dimension stock, each piece containing one-half board foot.

Item No. 3, finished, size 1⅝ by 36 inches; quantity, 7,500 pieces. Can be made from 1½ by 1½ by 36 inches rough-dimension stock, each piece containing 0.562 board feet.

AMENDMENTS TO TIMBER SCHEDULE NO. 18, YELLOW-PINE SHIPS.

Item 1. Rudder blade: To be 16 by 18 by 20 feet.
Item 2. Rudder blade: To be 16 by 18 by 26 feet.
Item 6. Rudder blade: To be 16 by 16 by 28 feet.
Item 8. Rudder blade: To be 16 by 22 by 22 feet.
Item 21: Rudder blade: To be 14 by 16 by 12 feet.
Item 25. Rudder blade: To be omitted.
Item 41. Upper-deck beams: To be 12 by 16 by 26 feet.
Item 42. Upper-deck beams: To be 12 by 16 by 26 feet.

If frames are faced close together, the pieces of item 68 will have to be made 12 inches wide instead of 10 inches.

KNEES REQUIRED.

[Dimensions given are the lengths of arms in feet.]

Item 153. Deadwood knees: After deadwood, 1 piece 8 by 5, 16 inches, square. Forward deadwood, 1 piece 10 by 5, 16 inches, open bevel.

New item. Propeller-arch knees: One piece 6 by 5, 16 inches, open bevel, and one piece 5 by 4, 16 inches, closed bevel.

Item 154. Breasthook knees: Four pieces 5 by 5, 12 inches, closed bevel.

Item 155. Hull lodging knees (all 9 inches thick):

2 pieces 7 by 5, open bevel.
4 pieces 6 by 3½, square.
2 pieces 5 by 5, open bevel.
2 pieces 5 by 4, closed bevel.
4 pieces 5 by 3½, square.
14 pieces 4½ by 4½, open bevel.
2 pieces 4½ by 4, open bevel.
2 pieces 4½ by 3½, open bevel.
12 pieces 4½ by 3½, square.
2 pieces 4 by 4, open bevel.
8 pieces 4 by 3½, square.
2 pieces 4 by 3, square.
4 pieces 3½ by 3½, square.
10 pieces 3½ by 3, square.
—
70

Item 156. Stanchion knees (all 8 inches thick):

2 pieces 4 by 3, open bevel.
4 pieces 4 by 3, square.
17 pieces 3½ by 3, square.
22 pieces 3½ by 3½, square.
5 pieces 3 by 3, square.
20 pieces 3 by 2½, square.
—
70

Item 157. Poop, bridge, and forecastle knees (all 6 inches thick):

2 pieces 6 by 5, closed bevel.
2 pieces 6 by 4, open bevel.
4 pieces 4 by 4, open bevel.
2 pieces 4 by 4, closed bevel.
6 pieces 4 by 4, square.
2 pieces 3½ by 3½, open bevel.
20 pieces 3½ by 3, square.
14 pieces 2½ by 2, square.
—
52

Item 158. Bridge house knees: Twenty pieces 2 by 1½, 3 inches thick.

Knees can be made of live oak, tamarack, spruce, cypress, white cedar, western red cedar, or Douglas fir. They can also be of juniper if of good quality and free from defects.

Trenails to be of Bois de Arc, iron bark, eucalyptus, black or yellow locust, or live oak.

On page 7 strike out all of item 25.

On page 16, opposite trenails, in last column, strike out "White oak or."

If the bilge planking is not edge bolted and the bilge frames are sawed out of wide flitches instead of being cut from natural crooks, filling doors will have to be fitted at the bilges in accordance with drawings 878 No. 18 A. The edge bolting of the plank is preferred.

The following additional items can be furnished rough:

Items 1, 2, 6, and 8. Rudder blade.
Item 10. Forward deadwood.
Item 11. Hold beams.
Item 12. After deadwood.
Items 13 to 17. Hold beams.
Item 21. Rudder blade.
Item 28. Engine foundation keelsons.
Item 29. Upper-deck waterway.
Item 33. Engine foundation keelsons.
Items 41 to 52. Upper-deck beams.
Item 54. Upper-deck short beams.
Items 59, 61, and 63. Stanchions.
Item 70. Girder keelsons.
Item 79. Poop, bridge, and forecastle deck beams.
Item 83. Girder keelsons.
Items 90 to 93. Poop, bridge, and forecastle deck beams.
Item 94. Planking, main rail.
Item 102. Poop, bridge, and forecastle decks, lock streaks.
Item 103. Poop, bridge, and forecastle decks, shelf.
Item 140. Chocks.

All timbers that are furnished rough can be put into ships unsurfaced except as regards necessary surfacing to make a good workmanlike job in the fitting of the timbers and the surfacing that would be brought about by having to shape the timbers.

In view of portions of certain of the timbers being cut away by shaping, scarfs, etc., the following defects may be allowed, in the discretion of the owner's timber inspector:

Item 4. Knightheads: These can have 12 inches of wane the entire length of one corner or any other defect that will work out.

Item 5. Stem: Wane or any other defect anywhere in the piece that will work out when timber is shaped will be allowed.

Items 23, 26, and 27. Hatch strong backs: These can have wane the entire length on two corners or any other defect that will work out when timber is shaped.

Item 32. Clamp timbers: 2,400 linear feet of these can have 5 inches of wane the entire length on one corner or any other defect that will work out when timber is shaped. Splits, shakes, or any other defects in the end that will work out in the scarf will be allowed.

Items 31 and 56. Bilge ceiling: 2 inches of wane or other defects that will work out will be allowed on two corners or sides on 600 linear feet of item No. 81 and 400 linear feet of item No. 56.

Items 41 to 52. Upper deck beams: Wane or any other defect will be allowed that will work out when the timber is shaped to 14 inches in width or as shown by plan of typical midship beam. In this connection it may be stated that items 41 to 51, inclusive, have the same camber in proportion to their length beginning at the center as item 52.

Item 35. Flitch timber frames: Pieces 3, 4, and 5 as numbered by Mr. F. L. Sanford on the models made by him, will allow any defects which can be worked out and must be of width to make shapes of the desired width or molded dimensions. If flitches are curved they will not need to be as wide in order to cut out the frames as if they are straight.

Item 38, piece No. 1, Flitch timber frames: This may be square or have bark edges, but must be 20 inches wide at the narrowest place. Any defects will be allowed that will work out in shaping the piece.

Items 77 and 78. Hatch coamings: These can have wane on one corner the entire length or any other defect that will work out.

Items 15, 19, 29, 32, 34, 64, 69, 70, and 76 will allow wane splits, shakes, or any other defects that will work out on half splice or scarfs.

SUBSTITUTIONS.

Substitutions referred to in the fourth paragraph of the notes are intended to apply to yellow-pine items of sizes 14 by 14 inches, or its equivalent, and

over. Items specified to be furnished in oak can not be furnished in fir. Any yellow-pine items can be furnished in white oak of the sizes as specified. The sizes in fir for substitutions of fir for yellow pine are as below noted:

Items 1 to 17. As listed, subject to amendments before mentioned.

Items 18, 19:

3 pieces 20 by 16—78 feet.
1 piece 20 by 16—60 feet.

Items 20 to 27. As listed, subject to amendments before mentioned, item 25 being omitted.

Item 28. 5 pieces 20 by 20—28 feet.

Items 29 to 32. As listed.

Item 33. 5 pieces 20 by 20—50 feet.

Item 34:

1 piece 20 by 20—22 feet.
1 piece 20 by 20—30 feet.
1 piece 20 by 20—32 feet.
1 piece 20 by 20—40 feet.
1 piece 20 by 20—44 feet.
1 piece 20 by 20—46 feet.
1 piece 20 by 20—52 feet.
1 piece 20 by 20—54 feet.
3 pieces 20 by 20—66 feet.
1 piece 20 by 20—68 feet.
1 piece 20 by 20—76 feet.
5 pieces 20 by 20—78 feet.
8 pieces 20 by 20—80 feet.

Item 36. As listed.

Items 41 to 52. As listed, subject to amendments before mentioned.

Items 54, 67, 80. As listed.

Item 68. 28 pieces 10 by 26—34 feet.

Items 35, 37 to 40, 53, 55, 58, 60. These are flitch timber frames, and if fir is to be used for any of them it will have to be used for all of them except by special arrangement between the shipbuilder and the mill that is assigned to saw his schedule. Individual flitch items in the fir construction do not correspond with individual flitch items in the yellow-pine construction, but the total of fir flitches required to replace the total of the yellow-pine flitches is as follows:

100 pieces 12 by 32—10 feet.
116 pieces 12 by 30—10 feet.
12 pieces 12 by 30—16 feet.
34 pieces 12 by 30—18 feet.
16 pieces 12 by 30—20 feet.
12 pieces 12 by 30—24 feet.
16 pieces 12 by 28—12 feet.
106 pieces 12 by 28—16 feet.
100 pieces 12 by 26—10 feet.
106 pieces 12 by 26—16 feet.
36 pieces 12 by 26—28 feet.
80 pieces 12 by 26—30 feet.
106 pieces 12 by 24—16 feet.
50 pieces 12 by 20—12 feet.
56 pieces 12 by 20—16 feet.
106 pieces 12 by 16—12 feet.
80 pieces 12 by 16—14 feet.
80 pieces 12 by 14—16 feet.
80 pieces 12 by 12—16 feet.

Swamp cypress may be substituted for the flitch timber frames in the same sizes as given in the yellow-pine schedule.

Swamp cypress may also be substituted for the aprons, deadwoods, hooks, and pointers in the same sizes as given in the schedule. These are items 7, 10, 12, and 125.

Substitutions involving changes in size should not be made by the mills without definite arrangement with the Emergency Fleet Corporation or with the shipbuilder to whom the schedule of timber is to be delivered.

UNITED STATES SHIPPING BOARD, EMERGENCY FLEET CORPORATION, TIMBER SCHEDULE AND SPECIFICATIONS FOR STANDARD WOOD STEAMSHIP, GULF AND ATLANTIC COAST, LARGELY SOUTHERN YELLOW PINE.

[May 20, 1917.]

GENERAL INFORMATION.

These specifications have been drafted for the information and guidance of lumber manufacturers, contractors, and shipbuilders, and constitute the official schedule of timbers to be used in the construction of wooden vessels on the Gulf and Atlantic coasts.

The purchase and inspection of lumber under this schedule will be conducted by the Emergency Fleet Corporation or under its direction. Inspections will be made at the mills where lumber is manufactured.

Purchases of the yellow-pine items called for will be made only in complete units of one or more ships, and will be awarded to mills or groups of mills undertaking to furnish complete units. Offers to furnish a partial list of yellow-pine items will not be considered.

White-oak flitch timber frames may be substituted for yellow pine in not to exceed 20 per cent of these items.

Approved May 20, 1917.

UNITED STATES SHIPPING BOARD, EMERGENCY FLEET CORPORATION,
MAJ. GEN. GEO. W. GOETHALS, *General Manager.*

RULES GOVERNING TIMBER SCHEDULE.

The accompanying lumber schedule is governed strictly by the following rules:

1. Dimensions of timbers in the form to be used in the ship are net, after surfacing. Material must be sawed large enough to surface down to these dimensions. Dimensions and quantities in the rough, in accordance with the usual milling practice, are given separately for the information of manufacturers.

2. The specification of "Dense merchantable" yellow pine means the following, as quoted from the January 1, 1917, grading rules issued by the Southern Pine Association; except that the wane rule shall not apply to decking and planking, which must be square edged:

"All merchantable timbers shall be well manufactured and shall be free from defects such as injurious ring and round shakes and through shakes that extend to the surface, unsound and loose knots, and knots in groups that will materially impair the strength. Seasoning checks and sap stain shall not be considered defects.

"Sizes under 9 inches on the largest dimension shall show two-thirds or more heart surface on one of the wide faces; sizes 9 inches and over on the largest dimension shall show two-thirds or more heart on both of the wide faces. When sticks are square the face showing the most heart shall govern the inspection on sizes under 9 inches and the two faces showing the most heart shall govern the inspection when 9 inches and over. Heart showing the full length, even if not two-thirds of the area as above, shall meet the requirements of this quality.

"Wane not exceeding one-eighth of the dimension of the face and one-quarter of the length of the piece on one corner, or the equivalent on two or more corners on not to exceed 10 per cent of the pieces, shall be admitted.

"Dense southern yellow pine shall show on either end an average of at least six annual rings per inch and at least one-third summer wood, or else the greater number of the rings shall show at least one-third summer wood, all as measured over the third, fourth, and fifth inches of a radial line from the pith. Wide-ringed material excluded by this rule will be acceptable, provided that the amount of summer wood as above measured shall be at least one-half.

"The contrast in color between summer wood and spring wood shall be sharp and the summer wood shall be dark in color, except in pieces having considerably above the minimum requirement for summer wood.

"In cases where timbers do not contain the pith, and it is impossible to locate it with any degree of accuracy, the same inspection shall be made over 3 inches

on an approximate radial line beginning at the edge nearest the pith in timbers over 3 inches in thickness and on the second inch (on the piece) nearest to the pith in timbers 3 inches or less in thickness.

"In dimension material containing the pith but not a 5-inch radial line, which is less than 2 by 8 inches in section or less than 8 inches in width, that does not show over 16 square inches on the cross section, the inspection shall apply to the second inch from the pith. In larger material that does not show a 5-inch radial line the inspection shall apply to the 8 inches farthest from the pith.

"The radial line chosen shall be representative. In case of disagreement between purchaser and seller the average summer wood and number of rings shall be the average of the two radial lines chosen."

3. The specifications governing yellow pine grades No. 1 common, A edge grain flooring, and A finish are given in the Standard Specifications for Grades of Southern Yellow Pine Lumber issued by the Southern Pine Association April 1, 1917.

4. Cypress flitches shall be equivalent in grade to No. 1 common. The specifications governing cypress grades are given in the Standard Grades and Classifications of the Southern Cypress Manufacturers' Association, edition of January 1, 1917.

5. Oak items, unless otherwise specified, shall be selected stock from the grade of construction oak timbers. The specifications governing oak grades are given in Association Standard Grades issued by the Hardwood Manufacturers' Association of the United States, October 1, 1915.

6. Knees shall be free from rot, heart or ring shake, large or loose knots, and other defects which would impair their strength for the pupose intended. They should conform with the following dimensions:

Thickness.	Length of body.	Length of arm.
Inches.	*Feet.*	*Feet.*
16	6 and up.	3 and up.
12	8 and up.	3 and up.
9	5 and up.	3½ and up.
8	4½ and up.	3 and up.
6	4 and up.	2½ and up.
4	3½ and up.	2 and up.

7. Treenails shall be of clear all-heart wood, straight grained, and thoroughly air-dried.

Timber schedule for standard wood steamship—Gulf and Atlantic coast.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
1	Rudder blade	18x18	18½x18½	.....	20	1	555	S4S	Yellow pine, dense merchantable.
2	.....do	18x18	18½x18½	.....	26	1	722	S4S	Do.
3	Hull end framing	16x24	16½x24	120	16 to 32 Av., 24	5	3,900	S2S	Do.
4	Knightheads	16x24	16 x24	.....	42	2	2,688	Rgh	Do.
5	Stem	16x20	16½x20½	.....	50	1	1,371	S4S	Do.
6	Rudder blade	16x16	16½x16½	.....	26	1	572	S4S	Do.
7	Apron	16x16	16½x16½	.....	48	2	2,112	S4S	Do.
8	Rudder blade	14x24	14½x24½	.....	24	1	691	S4S	Do.
9	Hull end framing	14x24	14½x24	120	16 to 32 Av., 24	5	3,420	S2S	Do.
10	Forward deadwood	14x16	14½x16½	.....	20	9	3,474	S4S	Do.
11	Hold beams	14x16	14½x16½	.....	20	2	772	S4S	Do.
12	After deadwood	14x16	14½x16½	.....	22	9	3,821	S4S	Do.
13	Hold beams	14x16	14½x16½	.....	30	2	1,158	S4S	Do.
14	.....do	14x16	14½x16½	.....	36	2	1,390	S4S	Do.
15	Keel	14x16	14½x16½	.....	38	1	733	S4S	Do.
16	Hold beams	14x16	14½x16½	.....	40	2	1,544	S4S	Do.
17	.....do	14x16	14½x16½	.....	42	2	1,621	S4S	Do.
18	.....do	14x16	14½x16½	.....	44	46	39,063	S4S	Do.
19	Keel	14x16	14½x16½	.....	48	6	5,557	S4S	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
20	Sternframing	14x14	14¼x14	.....	10	34	5,652	S2S	Yellow pine, dense merchantable.
21	Rudder blade	14x14	14¼x14¼	.....	14	1	237	S4S	Do.
22	Girder timbers and hatch coamings.	14x14	14¼x14¼	.....	16	8	2,166	S4S	Do.
23	Hatch strongbacks	14x14	14¼x14¼	.....	17	2	575	S4S	Do.
24	Stern framing	14x14	14¼x14	.....	18	34	10,174	S2S	Do.
25	Rudder blade	14x14	14¼x14¼	.....	20	1	333	S4S	Do.
26	Hatch strongback	14x14	14¼x14¼	.....	21	1	355	S4S	Do.
27	.....do	14x14	14¼x14¼	.....	25	1	423	S4S	Do.
28	Engine foundation keelsons.	14x14	14¼x14¼	.....	28	8	3,798	S4S	Do.
29	Upper deck waterway	14x14	14¼x14¼	1,400	24 to 40 Av., 32	.....	23,695	S4S	Do.
30	Girder timbers and hatch coamings.	14x14	14¼x14¼	1,400	24 to 40 Av., 32	.....	23,695	S4S	Do.
31	Bilge ceiling	14x14	14¼x14¼	2,000	30 to 50 Av., 40	.....	33,850	S1S2E	Do.
32	Clamp timbers	14x14	14¼x14¼	3,600	30 to 50 Av., 40	.....	60,930	S4S	Do.
33	Engine foundation keelsons.	14x14	14¼x14¼	.....	45	8	6,093	S4S	Do.
34	Main keelsons	14x14	14¼x14¼	.....	48	56	45,494	S4S	Do.
35	Flitch timber frames	12x24 and up	12¼x24	.....	5 and up.	300	45,938	S2S	Yellow pine, dense merchantable; Douglas fir, cypress, or crooked white or live oak.
36	Hull end framing	12x24	12¼x24	120	16 to 32 Av., 24	5	2,940	S2S	Yellow pine, dense merchantable.
37	Flitch timber frames	12x20	12¼x20	.....	14	32	9,147	S2S	Do.
38	.....do	12x20	12¼x20	.....	16	160	52,267	S2S	Do.
39	.....do	12x20	12¼x20	.....	16	90	29,400	S2S	Do.
40	.....do	12x20	12¼x20	.....	16	110	32,340	S2S	Do.
41	Upper deck beams	12x18	12¼x18	.....	26	2	956	S2S	Do.
42	.....do	12x18	12¼x18	.....	26	2	956	S2S	Do.
43	.....do	12x18	14¼x18	.....	30	1	551	S2S	Do.
44	.....do	12x18	12¼x18	.....	32	2	1,177	S2S	Do.
45	.....do	12x18	12¼x18	.....	32	2	1,177	S2S	Do.
46	.....do	12x18	12¼x18	.....	34	2	1,250	S2S	Do.
47	.....do	12x18	12¼x18	.....	36	2	1,324	S2S	Do.
48	.....do	12x18	12¼x18	.....	36	2	1,324	S2S	Do.
49	.....do	12x18	12¼x18	.....	38	2	1,396	S2S	Do.
50	.....do	12x18	12¼x18	.....	40	3	2,206	S2S	Do.
51	.....do	12x18	12¼x18	.....	40	2	1,471	S2S	Do.
52	.....do	12x18	12¼x18	.....	44	40	32,346	S2S	Do.
53	Flitch timber frames	12x16	14¼x16	.....	12	110	21,560	S2S	Do.
54	Upper deck short beams.	12x16	12¼x16	.....	16	66	17,251	S2S	Do.
55	Flitch timber frames	12x16	12¼x16	.....	16	110	28,747	S2S	Do.
56	Bilge ceiling	12x14	12¼x14¼	3,000	30 to 50 Av., 40	.....	43,650	S1S2E	Do.
57	Shelf timbers	12x14	12¼x14¼	700	30 to 50 Av., 40	.....	10,185	S4S	Do.
58	Flitch timber frames	12x12	12¼x12	.....	9	80	8,820	S2S	Do.
59	Stanchions	12x12	12¼x12¼	.....	10	15	1,876	S4S	Do.
60	Flitch timber frames	12x12	12¼x12	.....	12	260	38,220	S2S	Do.
61	Stanchions	12x12	12¼x12¼	.....	14	15	2,627	S4S	Do.
62	Girder timbers and hatch coamings.	12x12	12¼x12¼	.....	16	8	1,601	S4S	Do.
63	Stanchions	12x12	12¼x12¼	.....	24	36	10,807	S4S	Do.
64	Girder timbers and hatch coamings.	12x12	12¼x12¼	500	24 to 40 Av., 32	.....	6,254	S4S	Do.
65	Shelf timbers	12x12	12¼x12¼	1,800	30 to 50 Av., 40	.....	22,515	S4S	Do.
66	Flitch timber frames	12x10	12¼x10	.....	12	80	9,840	S2S	Do.
67	Hull end framing	10x24	10¼x24	120	16 to 32 Av., 24	5	2,460	S2S	Do.
68	Solid floors under engine bed.	10x22	10¼x22¼	.....	14	10	2,661	S4S	Do.
69	Planking garboards	10x14	10¼x14¼	.....	40	14	6,818	S1S2E	Yellow pine (square edged), dense merchantable.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
70	Girder keelsons	10x14	10¼x14¼	.....	45	12	6,412	S4S	Yellow pine, dense merchantable.
71	Hatch strongbacks	10x12	10¼x12¼	.....	17	4	712	S4S	Do.
72	Headers	10x12	10¼x12¼	.....	20	4	837	S4S	Do.
73	Hatch strongbacks	10x12	10¼x12¼	.....	21	2	440	S4S	Do.
74	.....do	10x12	10¼x12¼	.....	25	2	523	S4S	Do.
75	Side ceiling	10x12	10¼x12¼	8,000	30 to 50 Av., 40	.....	83,733	S1S2E	Do.
76	Shelf timbers	10x12	10¼x12¼	2,200	30 to 50 Av., 40	.....	23,027	S4S	Do.
77	Girder timbers and hatch coamings.	10x10	10¼x10¼	.....	16	8	1,121	S4S	Do.
78	.....do	10x10	10¼x10¼	.....	24	8	1,682	S4S	Do.
79	Poop, bridge, and forecastle deck beams.	10x10	10¼x10¼	.....	45	6	2,365	S4S	Do.
80	Forecastle and poop deck plank-sheer.	8x26	8¼x26¼	.....	20	14	5,054	S4S	Do.
81	Poop, bridge, and forecastle deck plank-sheer.	8x14	8¼x14¼	320	24 to 40 Av., 32	.....	3,136	S4S	Do.
82	Planking, garboards	8x14	8¼x14¼	560	30 to 40 Av., 35	16	5,488	S1S2E	Do.
83	Girder keelsons	8x14	8¼x14¼	.....	45	20	8,820	S4S	Do.
84	Bulkhead studding	8x12	8¼x12¼	.....	24	40	8,068	S4S	Do.
85	.....do	8x12	8¼x12¼	.....	26	40	8,762	S4S	Do.
86	Engine foundation packing timbers.	8x12	8¼x12¼	.....	30	15	3,810	S4S	Do.
87	Floor ceiling	8x12	8¼x12¼	6,700	24 to 40 Av., 32	.....	56,447	S1S2E	Do.
88	Sills and plates	8x10	8¼x10¼	200	20 to 30 Av., 24	.....	1,410	S4S	Do.
89	Sills	8x 8	8¼x 8¼	.....	20	6	681	S4S	Do.
90	Poop, bridge, and forecastle deck beams.	7x10	7¼x10¼	.....	17	16	1,684	S4S	Do.
91	.....do	7x10	7¼x10¼	.....	24	8	1,189	S4S	Do.
92	.....do	7x10	7¼x10¼	.....	38	15	3,529	S4S	Do.
93	.....do	7x10	7¼x10¼	.....	45	18	5,016	S4S	Do.
94	Planking, main rail	6x19	6¼x19¼	500	24 to 40 Av., 32	.....	5,012	S4S	Yellow pine (square edged), dense merchantable.
95	Planking, garboards	6x14	6¼x14¼	560	30 to 40 Av., 35	16	4,158	S1S2E	Do.
96	Sills and plates	6x10	6¼x10¼	250	20 to 30 Av., 24	.....	1,335	S4S	Yellow pine dense merchantable.
97	Planking, bilge	6x10	6¼x10¼	8,000	24 to 40 Av., 32	.....	42,733	S1S2E	Yellow pine (square edged) dense merchantable.
98	Shaft tunnel	6x10	6¼x10¼	1,600	24 to 40 Av., 32	.....	8,547	S4S	Yellow pine, dense merchantable.
99	Planking, topside	6x9	6¼x9¼	8,000	24 to 40 Av., 32	.....	38,533	S1S2E	Yellow pine (square edged), dense merchantable.
100	Studding	6x8	6¼x8¼	.....	8	60	2,004	S4S	Yellow pine, dense merchantable.
101	Sills and plates	6x8	6¼x8¼	250	20 to 30 Av., 24	.....	1,075	S4S	Do.
102	Poop, bridge, and forecastle decks, lock streak.	6x8	6¼x8¼	320	24 to 40 Av., 32	.....	1,376	S4S	Do.
103	Poop, bridge, and forecastle decks, shelf.	6x8	6¼x8¼	320	24 to 40 Av., 32	.....	1,376	S4S	Do.
104	Studding	6x6	6¼x6¼	.....	7	40	912	S4S	Do.
105	Sills and plates	6x6	6¼x6¼	200	20 to 30 Av., 24	.....	652	S4S	Do.
106	Planking, bead streak	6x6	6¼x6¼	360	24 to 40 Av., 32	.....	1,173	S4S	Yellow pine (square edged), dense merchantable.
107	Planking, bottom and side.	5x14	5¼x14¼	10,000	24 to 40 Av., 32	.....	62,342	S1S2E	Do.
108	Planking, poop, bridge, and forecastle.	5x14	5¼x14¼	400	24 to 40 Av., 32	.....	2,493	S1S2E	Do.
109	Poop, bridge, and forecastle clamps.	5x12	5¼x12¼	1,000	24 to 40 Av., 32	.....	5,358	S4S	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
110	Planking, bottom and side.	5x10	5¼x10¼	5,800	24 to 40 Av., 32	.....	26,008	S1S2E..	Yellow pine, (square edged), dense merchantable.
111	.....do.....	5x9	5¼x9¼	5,800	24 to 40 Av., 32	.....	23,472	S1S2E..	Do.
112	.....do.....	5x8	5¼x8¼	4,000	24 to 40 Av., 32	.....	14,443	S1S2E..	Do.
113	Poop, bridge, and forecastle decks, shelf.	5x8	5¼x8¼	650	24 to 40 Av., 32	.....	2,345	S4S....	Yellow pine, dense merchantable.
114	Sills and plates.....	5x5	5¼x5¼	400	20 to 30 Av., 24	.....	920	S4S....	Do.
115	Planking, poop, bridge, and forecastle decks.	4x10	4¼x10¼	400	24 to 40 Av., 32	.....	1,453	S1S2E..	Yellow pine (square edged), dense merchantable.
116	Shaft tunnel.....	4x10	4¼x10¼	800	24 to 40 Av., 32	.....	2,907	S4S....	Yellow pine, dense merchantable.
117	Ends of erections, bulkheads.	4x8	04¼x8¼	2,000	20 to 40 Av., 26	.....	5,850	S4S....	Do.
118	Planking, poop, bridge, and forecastle decks.	4x8	4¼x8¼	700	24 to 40 Av., 32	.....	2,047	S1S2E..	Yellow pine (square edged), dense merchantable.
119	Sills and plates.....	4x6	4¼x6¼	350	20 to 30 Av., 24	.....	776	S4S....	Yellow pine, dense merchantable.
120	Studding.....	4x4	4¼x4¼	.....	7	64	675	S4S....	Do.
121	.....do.....	4x4	4¼x4¼	.....	28	60	2,534	S4S....	Do.
122	Upper decking.....	4x4	4¼x4¼	42,000	16 up Av., 26	.....	56,600	S4S....	Yellow pine, (square edged) dense merchantable.
123	Decking in way of tanks.	4x4	4¼x4¼	8,000	16 up Av., 26	.....	10,667	S4S....	Do.
124	Hatch covers.....	3x8 to 16 Av., 12	3¼x8¼ to 16¼ Av., 12¼	2,400	14 up	.....	7,962	S4S....	Yellow pine, dense merchantable.
125	Timber for pointers and breasthooks.	3x12	3¼x12¼	.....	30	20	1,990	S4S....	Do.
126	Cross spalls.....	3x8	3x8	.....	24	400	19,200	Rough.	Do.
127	Bulkheads.....	3x8	3¼x8¼	14,000	20 to 40 Av., 26	.....	31,267	S4S....	Yellow pine (square edged), dense merchantable.
128	Deck carlings.....	3x6	3¼x6¼	.....	17	10	288	S4S....	Yellow pine, dense merchantable.
129	.....do.....	3x6	3¼x6¼	.....	24	56	2,275	S4S....	Do.
130	Bridge, poop, and forecastle ceiling.	3x6	3¼x6¼	2,000	20 to 40 Av., 30	.....	3,385	S4S....	Yellow pine (square edged), dense merchantable.
131	Upper house carlings..	3x5	3¼x5¼	.....	20	60	1,706	S4S....	Yellow pine, dense merchantable.
132	Sills and plates.....	3x5	3¼x5¼	100	20 to 30 Av., 24	.....	142	S4S....	Do.
133	Pilot-house carlings....	3x4	3¼x4¼	.....	16	15	276	S4S....	Do.
134	Planking, bulwark....	3x4	3¼x4¼	2,300	24 to 40 Av., 32	.....	2,645	S1S2E	Yellow pine (square edge), dense merchantable.
135	Studding.....	3x3	3¼x3¼	.....	7	29	180	S4S	Yellow pine, dense merchantable.
136	Poop, bridge, and forecastle decking.	3x3	3¼x3¼	28,000	16 up, av., 26	.....	21,000	S4S	Yellow pine (square edged), dense merchantable.
137	Engine and boiler hatch planking.	2x8	2¼x8¼	1,200	12 to 24,	.....	1,856	S4S	Do.
138	Bridge house and aft house planking.	x8	2¼x8¼	300	20 to 30, av., 24	.....	465	S4S	Do.

Timber schedule for standard wood steamship—Gulf and Atlantic coast—Contd.

Item.	Part.	Net size.	Gross size.	Linear feet.	Length.	Number of pieces.	Gross footage.	Finish.	Species and grade.
		Inches.	*Inches.*		*Feet.*		*Ft. b. m.*		
139	Sills and plates	2x8	2¼x8¼	450	20 to 30, av., 24		698	S4S	Yellow pine, dense merchantable.
140	Chocks	2x6	2¼x6¼	600	6 up.		705	S4S	Do.
141	Coal bunkers	Short 1⅝x5½	1¼x6	[1] 1,000	12 up.		1,692	D. & M.	Yellow pine, No. 1 common.
142	House decking	1¼x3¼	1¼x4	[1] 6,000	12 up.		8,910	D. & M.	Yellow pine, A edge grain flooring.
143	House sheathing, outside.	⅞x 5¼	1x 6	[1] 2,000	12 and up.		2,256	D. & M.	Yellow pine, A finish.
144	House sheathing, inside.	⅞x 5¼	1x 6	[1] 6,000	12 and up.		6,750	D. & M.	Do.
145	Rudder stock	20x20	20x20		30	1	1,000	Rgh	White oak, all heart, highest structural grade.
146	Rudder post	16x18	16½x18½		40	1	989	S4S	White oak, selected, structural.
147	Stern post	14x24	14½x24½		40	4	4,510	S4S	Do.
148	Shaft log	14x14	14½x14½		18	4	1,219	S4S	Do.
149	Horn timbers	12x16	12½x16½		20	2	663	S4S	Do.
150	Forecastle and poop deck chock rails.	6x 8	6¼x 8¼	180	20 to 30		773	S4S	Do.
151	Keel shoe	3x16	3½x16½		28	10	1,232	S4S	Do.
152	Mold material	⅞x12	1x12	1,000	14 to 16		1,000	S2S	Cypress, select, common.
153	Knees, deadwood	[2] 16			3x6	2		S2S	Live or white oak, tamarack, spruce, cypress, or white cedar. (See special specifications.)
154	....do	[2] 12			8 and up.	4		S2S	Do.
155	Knees, hull lodging	[2] 9				58		S2S	Do.
156	Knees, hull stanchions.	[2] 8				80		S2S	Do.
157	Knees, bridge poop, and forecastle hanging.	[2] 6				40		S2S	Do.
158	Knees, bridge house hanging.	[2] 4				20		S2S	Do.
	Trenails	[3] 1⅝x40				16,000			White oak or black locust.
	Do	[4] 1¼x26				4,000			Do.

[1] Square feet.
[2] Inches thick.
[3] 1⅝ inches diameter by 40 inches long.
[4] 1¼ inches diameter by 26 inches long.

Total gross footage, excluding knees and trenails, of yellow pine	1,425,547
Total gross footage, excluding knees and trenails, of hardwoods	10,386
Total gross footage, excluding knees and trenails, of cypress	1,000
Total	1,436,933

AMENDMENTS TO SPECIFICATIONS NO. 1 OF CERTAIN ITEMS OF TIMBER SCHEDULE FOR STANDARD WOOD STEAMSHIP OF YELLOW-PINE TYPE, PUBLISHED MAY 20, 1917.

CHANGES REGARDING YELLOW-PINE TIMBERS, AGREED TO BY MR. THEODORE E. FERRIS, ARCHITECT, UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION, AND COMMITTEE REPRESENTING SOUTHERN PINE EMERGENCY BUREAU.

It was agreed that the following changes in linear averages would be adopted and published as of June 1:

Item.	Part.	Net size.	Length.
		Inches.	*Feet.*
116	Shaft tunnel	4 x 10	24 to 40; average 32.
87	Floor ceiling	8 x 12	
31	Bilge ceiling	14 x 14	
56	.....do	12 x 14	
75	Side ceiling	10 x 12	
32	Clamp timbers	14 x 14	30 to 50; average 40.
76	Shelf timbers	10 x 12	
65	.....do	12 x 12	
57	.....do	12 x 14	
29	Upper deck waterway	14 x 14	24 to 40, average 32.
81	Poop, bridge, and forecastle deck, plank-sheer	8 x 14	
102	Poop, bridge, and forecastle deck, lock streak	6 x 8	
109	Poop, bridge, and forecastle clamps	5 x 12	
113	Poop, bridge, and forecastle decks, shelf	5 x 8	
103	.....do	6 x 8	
30	Girder timbers and hatch coamblings	14 x 14	
64	.....do	12 x 12	

All items to be ¼ inch full each size, i. e., 4¼ by 10¼ inches.

Decking is to be furnished rough, net dimensions being 3 by 3 inches and 4 by 4 inches.

Such timbers included in the schedule, as shipbuilders may desire, can be furnished in the rough, gross size, by mutual arrangement with the mills designated to saw the timbers.

Any of the larger-sized timbers can be furnished in fir if desired by the mill sawing the schedule.

CHANGES REGARDING OAK TIMBERS, AGREED TO BY ARCHITECT FERRIS AND COMMITTEE REPRESENTING THE HARDWOOD MANUFACTRURERS ASSOCIATION.

Item 146. Length reduced to 32 feet.

Item 147. Length reduced to 30 feet. No change in number of pieces.

Item 148. Length reduced to 12 feet. No change in number of pieces.

Item 150. Lengths may be 12 feet and up. No change in number of linear feet.

Item 151. Length reduced to 20 feet. Number of pieces increased to 14.

It will be satisfactory to have above items furnished by the mills hewn and sawed.

TREENAILS.

Treenails will be of the following finished sizes and qualities instead of the specifications given on page 16 of the schedule of May 20, 1917:

Size.	Quantity.
Inches.	
1¼ x 26	4,500
1⅜ x 32	12,500
1⅜ x 36	7,500

Firms which do not have facilities for manufacturing finished treenails, but which wish to supply rough oak lumber from which treenails may be made by shipbuilding firms, may find the following suggestions helpful:

MEMORANDUM REGARDING QUANTITY OF OAK LUMBER REQUIRED FOR THE MANUFACTURE OF TRENAILS.

Item No. 1, finished, size 1¼ by 26 inches; quantity, 4,500. Can be manufactured from 1½ by 1½ by 26 inches rough dimension stock. Amount of lumber in each piece is 0.405 board foot.

Item No. 2, finished, size 1⅝ by 32 inches; quantity, 12,500. Can be made from 1½ by 1½ by 32 inches rough dimension stock, each piece containing ⅓ board foot.

Item No. 3, finished, size 1⅝ by 36 inches; quantity, 7,500 pieces. Can be made from 1½ by 1½ by 36 inches rough dimension stock, each piece containing 0.562 board foot.

MEMORANDUM IN RE AMERICAN BUREAU OF SHIPPING.

AMERICAN BUREAU OF SHIPPING,
New York, December 28, 1917.

(*a*) For history, see charter, constitution, and by-laws, and pamphlet American Bureau of Shipping, December 1, 1916. Also see letter from President Taylor, American Bureau of Shipping (approved by executive committee), to Admiral Capps, general manager Emergency Fleet Corporation, September 11, 1917.

(*b*) The American Bureau of Shipping was reorganized March 1, 1916.

On Apr. 1, 1916, entire pay roll per annum amounted to	$28,400
On Jan. 1, 1917, entire pay roll per annum amounted to	81,000
On Sept. 1, 1917, entire payroll per annum amounted to	141,000
On Dec. 1, 1917, entire pay roll per annum amounted to	211,600
In January, 1918, entire pay roll per annum will be about	223,000

(*c*) The American Bureau of Shipping employed exclusive surveyors as follows:

On Apr. 1, 1916	5
On Jan. 1, 1917	18
On Aug. 1, 1917	30
On Oct. 1, 1917	38
On Dec. 1, 1917	68

In January, 1918, they arranged for four more, exclusive of surveyors.

(*d*) On April 1, 1916, the American Bureau of Shipping had only four offices of its own—New York City, Philadelphia, Newport News, and San Francisco.

December 1, 1917, has offices in Boston, New York, Philadelphia, Baltimore, Newport News, Mobile, New Orleans, Los Angeles, San Francisco, Portland, Seattle, Chicago, Pittsburgh, Cleveland, and men in Birmingham and Buffalo; also Detroit, Milwaukee, Ogdensburg, and Duluth.

(*e*) On January 1, 1916, the American Bureau of Shipping had for classification only 8 per cent of vessels then under construction in the United States.

On January 1, 1917, the American Bureau of Shipping had 21 per cent, notwithstanding the wholesale purchases of and contracts for new vessels in our yards by the British Government, alias "Cunard Line."

(*f*) Especial attention is drawn to the fact that there is no corporate stock owned by any individual or corporation and therefore no dividends will be paid to any person or body. When the business receipts exceed the expenditures the excess will be used for the further development of the bureau.

AMERICAN BUREAU OF SHIPPING,
New York, September 11, 1917.

Rear Admiral W. L. CAPPS,
United States Navy, General Manager Emergency Fleet Corporation,
United States Shipping Board, Washington, D. C.

DEAR ADMIRAL: I feel that you are now aware of the facts concerning the American Bureau of Shipping and that you are entitled to know them. Hence this letter for your information.

The bureau was originally incorporated in 1862 as the American Shipmasters' Association. This chartered title was changed in 1898 to the present corporate name American Bureau of Shipping. In 1867 there was established The Record of American and Foreign Shipping, published annually, with supplements issued as often as needed. The Record and supplements give general particulars of vessels, with additions and changes as they occur.

Though for 50 years this Record and the work of the bureau has been continued, the bureau has not until recently attained the prominence and reputation that it should, partly due to that neglect of establishing a merchant marine

worthy of a great Nation, but mostly, as I see it, because the bureau became, as it were, the sole property of one insurance company, the consequence being that no other companies, insurance or shipping, took any special interest in its progress or development. In justice to that company it must be said that were it not for their meeting all deficits the bureau would long ago have gone out of business.

I am informed that a few years ago the officials of this particular insurance company and some others interested, aware of the fact that something should be done to improve the situation, thought it would be wise to form a coalition with British Lloyds Registry which would be advantageous to all interests concerned as well as to both classification societies.

This idea seemed pleasing to British Lloyds, and in 1900 a conference between the representatives of Lloyds and the bureau resulted in a tentative arrangement apparently satisfactory to Lloyds' representative, Secretary Scott, then in this country, but the home office officials of Lloyds rejected the arrangement.

Again, in 1913, another conference was held having in view the same idea of coalition or working agreement, and there was proposed by Lloyds a tentative arrangement, which in turn was unsatisfactory to the American representatives.

In the fall of 1915, when the shipyards were full of work and shipping interests gaining very much in importance, the reorganization of the American Bureau of Shipping was proposed, and a reorganization committee was formed for this purpose.

The members of this committee were: Mr. P. A. S. Franklin, president of the International Mercantile Marine; Mr. Walter Wood Parsons, vice president of the Atlantic Mutual Insurance Co.; Mr. A. C. Pessano, president of the Great Lakes Engineering Works; Mr. Charles Skentelbery, marine superintendent, New England Coal & Coke Co.; Mr. W. A. Dobson, naval architect, Cramp's shipyard; Mr. Frank Gair Macomber, insurance underwriter, etc., Boston, Mass.; Mr. Harvey D. Goulder, admiralty lawyer, of Cleveland, Ohio, especially well known on the Great Lakes.

Meetings of this committee were held at various times from November, 1915, to January, 1916, and among other courses considered, an agreement with British Lloyds was for the third time discussed.

Previous to this time, January, 1916, I personally had no knowledge of or part in any of the incidents heretofore described.

In January, 1916, I was approached with the suggestion that I join the reorganization committee as chairman, with the intention of the committee that I should become president of the bureau on terms agreed upon, unless an arrangement, then under consideration, should be made with British Lloyds for a working agreement between the two classification societies with an American committee of which I might possibly become chairman. I found, in conversations with individual members of the committee, two entirely different ideas as to the ultimate result of the arrangement with British Lloyds, which was almost agreed upon.

To determine the question without chance of dispute, I called a meeting of the reorganization committee of the bureau and invited the Lloyds officials—Mr. Scott, secretary; Mr. French, chief surveyor; and Mr. Mancor, engineer surveyor—to attend the meeting. This invitation they courteously accepted, and to them was put the question to this effect: Suppose this agreement is made with your Lloyds, will the American committee formed thereunder have complete power to decide questions of classification of American vessels? In other words, suppose a new design in part or whole is made by an American for an American vessel, will the American committee have the power to grant the classification of such vessel without submitting the plans to the London officials of British Lloyds? The reply was, No; the plans must be sent to London.

The conference on this vital point was amplified to some extent, but that reply was the only determination reached and after the withdrawal of Messrs. Scott, French, and Mancor, our committee voted unanimously not to enter into any arrangement with British Lloyds, but to go ahead and make the bureau what it should be, for it seemed to the members of our committee that any possible arrangement that could be made between the British Lloyds lion and the American Lloyds lamb would result in the proverbial arrangement between the two animals wherein union could be secured only by their "lying down together" with the lamb inside of the lion.

In this I heartily concur, but, mind you, I do not criticize the British representatives for their action, for had I been one of themselves I should certainly,

under the circumstances, have taken the same course. They were defending their national rights and desires, as my colleagues and I shall assert and defend the rights and needs of the United States of America.

On February 29, 1916, at a full meeting of the board of managers, the report of the reorganization committee was adopted unanimously and the bureau started March 1, 1916, under new officers and with defined support from a number of shipbuilders, repairers, underwriters, and owners in just the same manner as was the British Lloyds started in its present form in 1834.

One of the conditions upon which I accepted the presidency of the bureau was that a certain sum of money should be contributed by the various interests for the support of the bureau for each of the three years following the 1st of April, 1916. Of the sum thus guaranteed for the year ended April 1, 1917, only a portion was called for and paid as follows:

Shipbuilders, etc	$9,162.50
Underwriters, etc	5,550.00
Ship owners	1,697.50
	16,410.00
To which was added special contributions amounting to	4,500.00
	20,910.00

For the coming year, ending April 1, 1918, having in view an increase in business with the necessity of a large increase in expenses, the executive committee authorized the call for a larger amount, of which there has been received $31,531.

It is to be especially remembered that the American Bureau of Shipping pays no dividends. The contributions referred to have been unselfishly made without thought of any possible future gain. Therefore without reserve, the action of these contributors in thus endeavoring to establish one of the means of furthering the cause of an American merchant marine, so vital to the entire interests of the American people, is in the utmost degree extremely patriotic and worthy of highest commendation.

During the 17 months since the reorganization one of the difficulties of the management has been the removing of old prejudices (just or unjust) against the bureau. We have done this to a very considerable extent, but we still hear, evidently from those who do not care to know the truth or desire the opposite, remarks to the effect that the bureau, though having good intentions, can not do the work required, has not the men nor the experience to furnish the proper inspection, etc., remarks of the sort not of accusation, but rather damning with faint praise, the sort of remark not made in the open, but with the intention of injury just the same. To all of such we have paid no attention, believing it to be the better to make the work worthy of recognition as to its excellence and thus speak for itself.

That you, however, may know something of our staff, I am sending herewith a partial list of those upon whom we will depend to keep the work going right in the office and field, the men who can act as supervisors over other surveyors. To these will be added as many as may be required for the business, let that be great as it may. Please look over this list and observe the origin and experience of these men. A good many are foreign born, but all are American citizens. British Lloyds had not as many surveyors in this country as are on this list until lately, when the British Government bought most of our vessels on the stocks, and I venture to say that they have not better men, man to man, than has the bureau. I wish to emphasize the change in the number in our employ since the reorganization. The entire pay roll per annum on April 1, 1916, was $24,800; on January 1, 1917, $81,000; and today is $141,000.[1] This increase in pay roll will surely prove to you that we have not hesitated to increase our service in advance of the necessity, and you may rest assured that we will not hesitate in the future to make further additions to our force. The men can be obtained, but you will concede that we have thus far done all that good business judgment warrants. Greater development will follow just as soon as the requirements justify it.

After assuming the presidency of the bureau I was told many times that we would have difficulty in procuring the classification of many vessels on account of the matter of insurance, which must be placed mostly in England.

[1] January 1, 1918, pay roll per annum, $220,000, 38 surveyors having been added since September, 1917.

The prediction then made that this condition would change has been fulfilled to a great degree. Marine insurance can be procured now in this country in much larger amounts than in 1916, and there is reason to believe this condition will improve as American business grows. I am supported in this belief by statements of underwriters and brokers who know the facts.

To-day at our executive committee meeting the question was asked by a shipbuilder of an underwriter, "What percentage of the value of a ship can now be placed in this country?"

The reply was to this effect: "One hundred per cent of the normal value."

It was also stated, and the statement confirmed by others, that insurance agencies in this country are now daily being asked to place insurance on English bottoms, which was being placed to a very great extent.

I have given you as briefly as possible the story of the American Bureau of Shipping and its reorganization. You may take my word for it that the ideals of the bureau are of the highest character. It is the intention to make its examination of designs beyond criticism. It has in its support the backing of all the first-class shipyards of the country, the yards that have produced for many years the principal vessels of the United States Navy with which you are most familiar. It has the support of a great many of the owners of American steamship lines. It has the support of American underwriters and practically all the foreign companies represented in this country, whose interests in offering marine insurance facilities here are vital to the well-being of an American merchant marine. Further, we have on our technical committee the best men in the shipyards for determining questions of design and upon these men, whose superiors are not to be found, we may call for advice.

It may have been once necessary for the United States to go abroad to learn how to build a ship, but this is no longer true. You in your position and I in mine have the opportunity to call for the best advice right here at home, and I can not conceive it possible to think otherwise.

I, therefore, respectfully ask from you and the United States Shipping Board the full support of the American Bureau of Shipping; and as respectfully protest, in this period of great opportunity for the upbuilding of a truly American merchant marine, against the employment of a foreign registry to advise or control in any degree the construction of American vessels built or to be built and financed by the citizens of the United States.

In this connection it is to be considered that the fabricated steel ships contracted for, or about to be contracted for, are of a new design—an American design—that under the stand taken by British Lloyds in 1916 when the coalition before referred to was under discussion, these designs could not have been passed by the American committee but would have to have been transferred to London for approval.

That Lloyds' representatives here in New York have now agreed to approve these plans with insignificant charges about sending the plans to London only emphasizes the real purpose of a foreign corporation.

The American Bureau of Shipping is not as old as Lloyds Registry, but, as Bulwer makes Richelieu say, "In the bright lexicon of youth there is no such word as fail." The American Republic is not as old as the Kingdom of Great Britain, but I know you will not admit that the United States can not stand upon their own feet.

So the men who are back of the bureau feel about its future. I may pass, but the bureau will go on. Any change will be most unfortunate, for it requires no great discernment to realize what a failure to have and to hold our own upon the seas will mean to our people, the people of the United States of America.

Having put this matter before you for personal consideration, permit me to suggest that you make an appointment (giving me a few days' notice) for a meeting with yourself and the whole Shipping Board and a representation of ship owners, builders, and underwriters. At such a meeting any or all details may be fully discussed. I am sure that you will all discover the patriotism which inspires the sentiments of such representation, a patriotism unalloyed with desire for personal gain.

Very respectfully,

STEVENSON TAYLOR, *President.*

(Thereupon, at 3.30 o'clock p. m., the committee proceeded to the consideration of executive business, and, at 5 o'clock p. m., adjourned to meet to-morrow, Thursday, January 10, 1918, at 2 o'clock p. m.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

THURSDAY, JANUARY 10, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjurnment, at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Martin, Jones, Harding, and Johnson.

The CHAIRMAN. In the hearing of yesterday Mr. Edward F. Carry made some comment about the rates on full power-driven vessels operating under the requisition charter, and he afterwards handed in a circular on that subject which I think had better go in the record; it shows concisely what the rates are. If there is no objection, that will go in the record at this point.

(The statement referred to is here printed in full, as follows:)

REQUISITION RATES.

The following rates will govern full power-driven vessels operating under the requisition charter:

I.

CARGO SHIPS AND TANKERS.

1. Ships operating under "Time form":

Per deadweight ton per month—

Over 10,000 tons deadweight capacity	$5.75
8,001 to 10,000 tons deadweight capacity	6.00
6,001 to 8,0000 tons deadweight capacity	6.25
4,001 to 6,000 tons deadweight capacity	6.50
3,001 to 4,000 tons deadweight capacity	6.75
2,500 to 3,000 tons deadweight capacity	7.00

Vessels of speed in excess of 11 knots to be allowed 50 cents per ton deadweight per month for each knot or part of a knot over 11 knots.

2. Ships operating under "Bare boat form":

Per deadweight ton per month—

Up to and including 11 knots	$4.15
For each knot or part of knot over 11 knots	.50

II.

PASSENGER SHIPS.

1. Ships operating on "Time form":

Class A.—Ships with permanent accomodations for more than 150 passengers.

Per ton gross register per month—

Over 10 and not exceeding 11 knots	$9.00
Over 11 and not exceeding 12 knots	9.50
Over 12 and not exceeding 13 knots	10.00
Over 13 and not exceeding 14 knots	10.50
Over 14 and not exceeding 15 knots	11.00
Over 15 knots	11.50

Class B.—Ships with permanent accomodations from 75 to 150 passengers.
Per ton gross register per month—

Over 10 and not exceeding 11 knots	$8.00
Over 11 and not exceeding 12 knots	8.50
Over 12 and not exceeding 13 knots	9.00
Over 13 and not exceeding 14 knots	9.50
Over 14 and not exceeding 15 knots	10.00
Over 15 knots	10.50

2. Ships operating under "Bare boat form":
Per ton gross register per month—

Up to and including 11 knots	$5.75
For each knot or part of knot over 11 knots	.50

The above rates will govern: (1) All vessels requisitioned under the general order of October 12, 1917; (2) all vessels individually requisitioned by the Shipping Board before October 12, 1917.

The rates are subject to revision by the Shipping Board at intervals of 90 days (commencing Oct. 15, 1917.)

The CHAIRMAN (continuing). I have also received from the Commissioner of Navigation a list of vessels built in the United States for foreign owners from March 1 to June 15, 1917. I think that should also go into the record at this point.

(The statement referred to is here printed in full as follows:)

List of vessels built in the United States for foreign owners from Mar. 1 to June 15, 1917.

	Name of vessel.	Gross.	Net.	Where built.	Flag.
March	Steam sloop Luise Nielsen	5,088	4,359	Seattle, Wash	Norwegian.
April	Steam sloop Bessa	6,378	.....	Alameda, Cal	Do.
Do	Steam sloop Thordis	4,823	.....	Oakland, Cal	Do
Do	Steam sloop Regulus	3,000	.....	Alameda, Cal	Do.
Do	Gasoline sloop Tacoma	1,608	1,343	Seattle, Wash	Do.
May	Steam sloop Golden Gate	7,500	.....	do	Do.
Do	Steam sloop Bacchus	2,045	1,220	Wyandotte, Mich	French.
Do	Steam sloop Angers	2,045	1,220	do	Do.
Do	Steam sloop War Patrol	2,045	1,220	do	British.
Do	Steam sloop Cleveland	2,045	1,258	Superior, Wis	Norwegian.
Do	Steam sloop Aristobulo Del Valle	2,454	1,459	Ecorse, Mich	Argentine.
June	Steam sloop Hisko [1]	5,676	3,524	Chester, Pa	Norwegian.
Do	Gasoline sloop Ada [1 2]	2,500	.....	Manitowoc, Wis	Do.
Do	Steam sloop Golaa	5,671	3,518	Chester, Pa	Do.
Do	Steam sloop Key West	7,500	.....	Seattle, Wash	Do.
Do	Steam sloop War Baron	6,239	4,677	Portland, Oreg	British.
Do	Steam sloop War Captain	2,200	.....	Port Richmond, N. Y.	Do.
Do	Steam sloop War Cross	2,050	.....	Cleveland, Ohio	Do.
Do	Steam sloop War Monarch	6,238	.....	Alameda, Cal	Do.
Do	Steam sloop Toulouse	2,033	1,200	Superior, Wis	French.
Do	Steam sloop War Knight	6,238	.....	San Francisco, Cal	British.
Do	Steam sloop War Major	2,045	1,220	Wyandotte, Mich	Do.
	Total (22 vessels)	88,621	.....		

[1] Vessels taken over by the United States Shipping Board.
[2] Name changed to Lake Oneida.

The CHAIRMAN (continuing). I have also a communication from Mr. Charles R. Page, one of the commissioners of the Shipping Board, with reference to the terms of the contracts made with the Grant-Porter-Smith-Guthrie Co., the Peninsula Shipbuilding Co., and Sanderson & Porter, the companies that were referred to in the testimony given by Mr. Page and others before this committee.

The letter of Mr. Page, and the accompanying memoranda, will be inserted in the record at this point. It seems to me that probably it will not be necessary to have the contracts themselves printed in the record. I think the statements will explain sufficiently with regard to the contracts; and the contracts themselves can be inserted later on, if the committee so desires.

Senator JONES. I suggest, Mr. Chairman, that the contracts ought also to go in the record at this point, and then we will have the exact terms of the contracts shown at this point. I believe that all such contracts as those ought to go into the record.

The CHAIRMAN. Then, it if is the desire of the committee, the contracts with the companies I have named will also be inserted in the record at that point; and we will then have in the record all the information inclosed with the communication of Mr. Page.

(The letter, memoranda, and contracts referred to are here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
Washington, January 4, 1918.

MY DEAR SENATOR FLETCHER: Pursuant to the request of Senator Nelson, I am sending to you, in answer to questions put to me relative to the terms of the contracts with the Grant-Smith-Porter-Guthrie Co., the Peninsula Shipbuilding Co., and Sanderson & Porter, the firms to which reference was made in my testimony, the memorandum next attached, entitled: "Payments on account actually made in order to enable contractors to prosecute Government work." This, I think, will succinctly furnish the information desired. In case it is not sufficient, there is also attached copies of the contracts, with explanatory memoranda, and in addition, a memorandum sent me by Admiral Bowles, which gives a brief outline of the conditions in question.

I trust this will fully cover the point, and beg to remain,

Very truly, yours,

CHAS. R. PAGE, *Commissioner.*

Hon. DUNCAN U. FLETCHER,
Chairman Committee on Commerce,
United States Senate,
Washington, D. C.

PAYMENTS ON ACCOUNT ACTUALLY MADE IN ORDER TO ENABLE CONTRACTORS TO PROSECUTE GOVERNMENT WORK.

To Peninsula Shipbuilding Co.:

$36 per M on all lumber entering into construction.

$5,000 a year on dock rentals.

$16,000 a year to cover expenses of New York office in connection with preparation of plans and other engineering work for the four vessels under contract.

$6,000 a year rental for ground now occupied by the four shipways.

The salary list entering into "cost of building" the four vessels is as follows:

President and general manager	$10,000 a year
Superintendent	4,800 a year
Purchasing agent	1,800 a year
Bookkeeper	1,800 a year

Sanderson & Porter:

$535,762 as reimbursement for plant extension, purchase of material, and other necessary expenses incurred in the prosecution of Government work. Upon signing of contract with Emergency Fleet Corporation, this company found it necessary to assign all advance and partial payments to the Columbia Trust Co., New York, in order to obtain sufficient credit to prosecute the work. All vouchers have been approved by the district officer charged with the inspection of the work, and have been carefully checked by the auditing department of the Emergency Fleet Corporation.

Grant, Smith, Porter, Guthrie Co.:

$400,000 on account to be advanced to assist the company in carrying an investment of more than $1,000,000 (outright purchase of Aberdeen Shipbuilding Co. yards and construction of St. John's shipyard). This payment has been requested and approved by the district officer, but has not yet been actually made. Construction is well advanced on 11 of the 12 ships under contract. Five are scheduled to be launched in January and February, current, and the others will follow at the rate of four ships each month.

JANUARY 2, 1918.

SUBSIDY ARRANGEMENTS TO FACILITATE THE CONSTRUCTION OF WOODEN SHIPS.

Memorandum for Mr. C. R. Page.

Contracts Nos. 34 and 40 with the Grant-Smith-Porter-Guthrie Co.; contract No. 5 with the Peninsula Shipbuilding Co.; and contract No. 11 with Sanderson & Porter, provide for Government financial aid to the contractor, in the discretion of the Fleet Corporation, as follows:

Cost of labor, materials, equipment, machinery, and supplies entering directly into the construction of vessels; also such running and overhead expenses, as insurance, management salaries, rents, and other indirect charges arising solely from Government work. (See paragraphs (f) and (g) of attached contracts.)

These items are chargeable as "costs," and cost is defined (Section II) as including such items as are classified as jutifying exemption in the computation of an income tax. (See section 302, revenue act of Sept. 8, 1916, copy attached.)

Instances illustrative of the actual working out of these arrangements in practice to date can be seen in the attached copies of legal opinions dated November 20 and 28, and of a letter from Maj. Gen. George W. Goethals to the Peninsula Shipbuilding Co., dated May 28. Detailed statement of actual advances is also attached.

It should be noted that in each and every case which can arise under these subsidy provisions the Government is thoroughly protected: (1) By the contract stipulation that no responsibility is assumed for any such expenditure unless specifically authorized in advance by the general manager of the Fleet Corporation. (2) By the contract stipulation that all plant extensions, leases, etc., which are financed by Government aid shall become Government property, and shall remain such after the termination of the contract.

The vessels under construction at the three shipyards in question are 34 in number; aggregate 121,000 deadweight tons, and will cost $12,600,000.

F. T. BOWLES,
Manager, Division Steel Ship Construction.

NOVEMBER 20, 1917.

TIME LIMIT FOR EXPENDITURE AND CONSTRUCTION, GRANT-SMITH-PORTER-GUTHRIE CO. CONTRACT 34 (ST. JOHNS).

Memorandum for division shipyard plants (attention Admiral Rousseau).

Replying to your inquiry dated November 16:

The contractor agrees to deliver the hulls on certain specified dates. No time is specified within which the construction work must be completed. The owner agrees to bear the cost of the establishment of and extensions, increases, and additions to plant and property of the contractor authorized by the owner. The owner has full control of expenditures for these purposes and contracts therefor are to be placed by the contractor in the name of the owner.

The owner's obligation, as it is implied in the contract, is to make such expenditures for plant as will enable the contactor to carry out his contract and complete the vessels within the time specified. If the point is reached when it is entirely clear that, through no fault of the owner, the contractor can not meet his contract requirements, then, as a legal matter, the owner would be justified in saying that he would make no further payments to plant.

Before such a decision is made the Fleet Corporation must be sure of two things:

1. That even if it continues to make contributions to plant, the contractor will be unable to get out his vessels within the scheduled time; and
2. That the delay has not been due to the fault of the owner.

(Of course, there is a further consideration that contracts made by the contractor in the name of the Fleet Corporation will continue to be valid and obligations thereunder must be carried out.)

If the Fleet Corporation has, itself, caused any part of the delay or if its judgment in coming to these conclusions is at fault, the constructor might do two things:

1. He might claim, under Article III, that he is entitled to an extension of time and to have this matter arbitrated under the provisions of Article VII; or,

2. He might claim that there was a breach of the contract on the part of the Fleet Corporation which entitled him to cancel the contract and to hold the Fleet Corporation liable for damage.

C. S. STERN, *Assistant Counsel.*

NOVEMBER 28, 1917.

TIME LIMIT FOR EXPENDITURES AND CONSTRUCTION, GRANT-SMITH-PORTER-GUTHRIE CO., CONTRACT 34 (ST. JOHNS).

Memorandum for Admiral Rousseau.

Replying to your memorandum of November 26:

It was not intended in my memorandum of November 20 to convey the idea that a limit for expenditure on plant work could be fixed only where the contractor and the Emergency Fleet Corporation agreed, although as a practical matter that is the most desirable way.

What I desired to point out in the memorandum was that if the contractor does not agree, we can still place a limit, but the limit must be a reasonable one, and not an arbitrary one. My memorandum was designed to outline our duty toward the contractor and to caution against the arbitrary imposition of a limit by showing the dangers that would arise therefrom.

C. S. STERN, *Assistant Counsel.*

MAY 28, 1917.

Mr. F. C. KNAPP,
The Peninsula Shipbuilding Co.,
52 Pine Street, New York, N. Y.

DEAR SIR: Referring to your contract WC 3, dated May 15, and to your memorandum of same date of certain changes in connection with the business of the Peninsula Shipbuilding Co., which you desire to be taken into account from May 15 as a part of fixed charges mentioned in the contract, I beg to confirm the oral approval given when you were in Washington for these charges, as follows:

Land rent		$9,000
Dock rent		5,000
Administration and management:		
President	$10,000	
Secretary	5,000	
Assistant secretary	3,000	
Manager	6,000	
Buyer	4,000	
Superintendent	4,000	
		32,000
New York office		24,000
		70,000

For depreciation, 30 per cent of cost of plant.

It is understood, of course, that these changes are not to be billed against the cost of the vessels in question unless they are actually incurred.

As regards the charges for the New York office, it is understood that these are based on a contract entered into with your New York representatives on a percentage basis; that the percentage is one-half or less than the usual commission, and that the basis of the $24,000 charge is six vessel per annum, at $4,000. As regards the depreciation for the cost of the plant, it is understood that this is based on your expression that upon the conclusion of contracts for the Emergency Fleet Corporation there will be no profitable business remaining for your company, and that therefore the entire cost of the plant will have to be absorbed within practically three or four years from the time it was purchased. This of course is a matter which is subject to adjustment upon the conclusion of the corporation's contract, in case the conditions at that time do not accord with your expectations, as stated herein above.

Yours, very truly,

GEO. W. GOETHALS, *General Manager.*

CONTRACT.

[Contract No. 84. Hull Nos. 250–261.]

Contract made this 25 day of June, 1917, between Grant Smith-Porter-Guthrie Company, a corporation organized under the laws of the State of Oregon, party of the first part (herein called the Contractor), and the United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the Owner).

For valuable considerations, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done—Deliveries.*—The Contractor hereby agrees to construct, in accordance with the original Hough standard drawings and specifications of the Owner hereto attached and hereby made a part of this contract, under the rules and regulations of the American Bureau of Shipping, Twelve (12) wood cargo-carrying steamers. The Contractor agrees to deliver said steamers complete with propelling machinery and equipment and auxiliaries (such propelling machinery and equipment and auxiliaries to be supplied by the Owner at its sole expense) according to said drawings and specifications to the Owner afloat at the works of the Contractor at St. Johns, Oregon, as follows:

The first hull to be delivered on or before February 1, 1918, and the remaining number of hulls to be delivered as follows:

One hull every twenty days thereafter, so that the last hull will be delivered on or about September 1, 1918.

II. *Payment.*—In consideration of the performance of this agreement by the Contractor the Owner agrees to pay therefor a lump sum of approximately $285,000 for each such completed hulls; such purchase price to be the actual cost of the work plus the Contractor's profit as hereinafter provided.

The Owner guarantees the Contractor a profit of $19,000 on each completed hull, payable to the Contractor when such hull is delivered to and accepted by the Owner. The Contractor agrees that the Owner may withhold from said purchase price of $285,000.00 per hull any amount over the actual cost of the work plus $19,000.00 (so that the Contractor's profit on each hull shall be limited to $19,000).

The Owner assumes no responsibility for inability to obtain or have delivered the plant or ways, or any part thereof.

Actual cost.—For the purposes of this contract the actual cost shall be generally as defined in the United States revenue bill of September 8, 1916, section 302, in so far as the requirements of said revenue bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in paragraphs (*b*) to (*e*) of this article, and all items under paragraphs (*f*) and (*g*) shall, as far as possible, be submitted to the Owner in advance for its approval, and no item so submitted in advance and disapproved by the Owner shall be payable to the Contractor:

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building, or construction of the hulls and other direct charges (such as insurance on the hulls).

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs, and maintenance, light, heat, power, insurance (including liability and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans, contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property, account being taken of exceptional depreciation of extensions, increases and additions to plant and property specially acquired

for or devoted to the manufacture or erection of the work or the construction of the hull under this contract, provided the same have not been paid for by the Owner under (*g*).

(*g*) The cost of labor, materials, machinery, equipment, and supplies (other than real estate) for the establishment of and extensions, increases, and additions to plant and property of the Contractor authorized by the Owner specially acquired for or devoted to the building or construction of the hulls under this contract and rentals actually paid for such establishments, extensions, increases, and additions authorized by the Owner.

Physical property and unexpired leases represented by items of cost included in paragraph (*g*) supra paid for by the Owner shall continue to be the Owner's property after termination of this contract, but may be purchased by the Contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals as general manager of the Owner or his successors in such office (herein called "the General Manager"), and his decision shall (except as hereinafter stated) be binding on both parties. Wherever possible, he will lay down in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the Contractor. He will determine methods to be followed by the Contractor in preparing bills and by engineers and auditors in certifying to them and will determine the items which must be referred for his decision. He will, so far as possible, determine in advance the ratio of amortization referred to in paragraph (*f*) supra and allowances to be made for indirect charges.

Naval architect.—The Owners will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these hulls. They and their assistants, described herein as the Owner's inspectors, will represent the Owners and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as the representative of the Owner and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the Owner shall be binding, subject in all cases to appeal to the General Manager of the Owner.

Auditors.—The Owner may send an auditor to the works of the Contractor to supervise and assist in the accounting.

The accounts and records of the Contractor shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the Contractor in such form as may be required by the general manager. No change shall be required in the present methods and principles of keeping costs by the Contractor, provided the general manager deems them adequate for the determination of actual costs. All information obtained from Contractor's accounts and records shall be treated as confidential.

Time of payments.—Payments shall be made to the Contractor by the Owner monthly within 15 days after the submission of bills to cover the approved actual cost for the previous months, as defined under paragraphs (*a*) to (*e*), inclusive, and together with the additional approved actual cost, as defined under paragraphs (*f*) and (*g*).

No payment shall be made except when bills are certified by one of the Owner's inspectors or an auditor. Final approval of all bills by such inspectors or auditors shall be necessary for payment.

Orders.—The Owners shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of and extensions, increases, and additions to plants and property), and all contracts and orders placed by the Contractor shall be in the name of the Owner by the Contractor as agent, and it is understood that the Contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the Owner.

Inspector's certificates.—Every facility shall be afforded by the Contractor to the inspectors appointed by the Owner and in the event the Contractor shall order any material without the Owner's approval, it shall be the duty of such inspectors, either personally or by deputies, to inspect such materials and to accept such materials as are in conformity with specifications and promptly to reject all materials which do not comply with specifications; such condemna-

tion, if any, of such materials, to be made by such inspectors before the same are worked or put into the construction, if opportunity to do so is afforded by the Contractor. Said inspectors shall also have the right of rejection after such materials are worked or put into construction, if facilities are not given for inspection prior thereto.

Installation of machinery.—The Owner agrees at its sole expense, to cause to be supplied to the Contractor, at the aforesaid works of the Contractor, the necessary propelling machinery and equipment and auxiliaries for said hulls. The Contractor agrees to completely install in said hulls, in the manner provided in said drawings and specifications, such propelling machinery and equipment and auxiliaries as shall be supplied by the Owner as aforesaid. In addition to any profit to the Contractor elsewhere provided for in this contract, the Owner agrees to pay the Contractor for the installation of such propelling machinery and equipment and auxiliaries as aforesaid, upon completion and acceptance thereof by the Owner, the actual cost of such installation, (meaning the Contractor's actual out of pocket expenses), plus 10% of such actual cost. The provisions of this contract pertaining to the determination, supervision, auditing, payment, approval of orders and inspection of the actual cost and construction of the hulls shall also be applicable to the installation of said propelling machinery and equipment and auxiliaries.

III. *Alterations.*—The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions not materially affecting the general design of the hulls as the Owner may deem necessary. The Contractor agrees to accede to and carry the same into effect, as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, the dispute shall be determined as provided in Article VII hereof. If the Contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the Owner, or by reason of alterations or additions by the Owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the Contractor, but not delivered, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the Owner under Article XI hereof or any other cause beyond the control of the Contractor beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The Contractor will during the progress of the work on said hulls and until delivery of them place and maintain insurance on each of them in proper amount by companies approved by the Owner to cover work done and materials on hand for or appropriate to the use of the hulls in and about the premises of the Contractor. Such insurance shall provide against fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the Owner, not less than the sum of payments made under this contract from time to time, provided that the amount of insurance required shall not at any time exceed the amount available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the Owner for the use of the Owner and the Contractor as interest may appear.

Forfeiture.—In case of failure or omission of the Contractor at any stage of the work prior to completion from any cause or causes to go forward with the work and make progress toward its completion satisfactory to the Owner, the Owner may declare this contract forfeited. In that event the Owner may immediately enter the works and premises of the Contractor and take possession of the hulls and materials and equipment. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the hulls and all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board, the Owner may proceed with the completion of the hulls in accordance with this contract either at the works of the Contractor with its equipment, yard and facilities or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner

shall thus cause this contract to be forfeited, the amount to be paid hereunder shall be the actual cost (as defined in Article II hereof) unless theretofore paid, plus a reasonable rental for the appliances, yards, and facilities of the Contractor, which, after said forfeiture, are used by the Owner, not to exceed the agreed profit aforesaid: *Provided, however*, That if the Contractor can show to the satisfaction of the general manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which he had no control, the Contractor shall be allowed such opportunity as the general manager of the Owner may deem reasonable to complete the work within the time prescribed by this contract.

VI. *Title.*—It is agreed that as the payments, provided for herein, are made by the Owner on account of materials ordered by or assembled or set up in the yard of the Contractor or used in the construction hereunder, the same to the extent of the payments made shall become the property of the Owner. Nothing contained herein, however, shall be construed as a waiver by the Owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the general manager of the Owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case after delivery of a completed hull to the Owner under this contract (but only in that event) the Contractor shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder or any kind and shall give notice to the Owner to that effect within 30 days after delivery or after final payment by the Owner, such matter shall be determined by a board which shall consist of three naval architects or engineers, or experts to be appointed, one by the Owner, one by the Contractor, and one by the American Bureau of Shipping. Such Board shall within 30 days after submission of such matter to it determine what if any sum shall be due by the Owner to the Contractor hereunder on account of such delivered hull and its finding (made by a majority of the Board) shall be conclusive on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essence of this contract. The Contractor agrees to commence and carry through to completion the work under this contract with dispatch, and that it will not enter into any other contract or undertake any other work or service at its yards which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. *Liens.*—The Contractor shall keep the hulls in course of construction free and clear from all claims, liens, or any encumbrances of any kind or description, and shall before delivery show to the satisfaction of the Owner that the hulls are free and clear from every claim, lien, and encumbrance, except claim of lien of the Contractor.

X. *Claims and patents.*—The Contractor shall be responsible for all claims, if any, made against the Owner for any infringements of patents or patent rights and for the use of any patented articles and shall defend and save harmless and ndemnify the Owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringement of patents or patent rights, or of the use of any patented articles; provided, that the Owner will, in all instances, notify the Contractor of any claims made against it by reason of any such infringement or use of patented articles, at the time when such claim is made, and will promptly notify the Contractor of any suit or suits brought against it therefor and give the Contractor an opportunity to defend the same; and provided that no payment shall be made by the Owner unless with the consent of the Contractor or pursuant to a decree by a proper court in such litigation, and provided that the Contractor shall not be liable in the event the Owner specifically orders the use of the patent or patented article, whether or not the existence of the patent be known to the parties hereto.

XI. *Labor.*—The Contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the Owner.

XII. *Not assignable.*—This contract may not be assigned by the Contractor without the consent of the Owner in writing, provided, however, that nothing in this contract shall be construed as prohibiting the assignment of payments due, or to become due, to the Contractor for the purpose of obtaining credit for furthering the construction hereby undertaken; but the Owner may by writing make such prohibition, and it is further understood that this contract may be assigned to a corporation to be formed by the Contractor after the financial standing of such corporation shall have been approved by the Owner.

XIII. Payments hereunder required to be made direct to the Contractor shall be made by the Owner by check addressed to the Contractor at Multnomah Hotel, Portland, Oregon.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attested on the day above stated.

GRANT SMITH-PORTER-GUTHRIE CO.,
By ANDREW R. PORTER, *President.*

[SEAL.]
JULY 3, 1917.

Attest:
H. H. HUNT, *Secretary.*

Countersigned:
E. V. HAUSER, *Director.*

UNITED STATES SHIPPING BOARD, EMERGENCY FLEET CORPORATION,
WILLIAM DENMAN, *President.*
GEORGE H. SAVAGE, *Secretary.*

CONTRACT.

[Contract No. 40. Hull Nos. 285–292.]

Contract made this 14th day of July, 1917, between Grant Smith-Porter-Guthrie Company, a corporation organized under the laws of the State of Oregon, party of the first part (herein called the Contractor), and United States Shipping Board, Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the Owner).

For valuable considerations, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done—Deliveries.*—The Contractor hereby agrees to construct, in accordance with the Ferris standard drawings and specifications of the Owner, as amended to and including June 1, 1917, hereto attached and hereby made a part of this contract, under the rules and regulations of the American Bureau of Shipping, eight (8) wood cargo-carrying steamers. The Contractor agrees to deliver said steamers complete, with propelling machinery and equipment and auxiliaries, according to said drawings and specifications, to the Owner, afloat at the works of the Contractor at Aberdeen, Washington, as follows:

The first steamer to be delivered on or before Feb. 28, 1918, and the remaining number of steamers to be delivered as follows:

One steamer on the first day of each succeeding month, so that the last steamer will be delivered on September 30th, 1918.

II. *Payment.*—In consideration of the performance of this agreement by the Contractor, the Owner agrees to pay therefor a lump sum of approximately $500,000.00, as follows:

II. The Owner agrees to pay the Contractor the actual cost of each steamer plus the difference between such actual cost (provided such actual cost be less than $500,000.00) and $500,000.00. Such difference shall be paid to the Contractor as its profit. It is estimated that such profit will be at least $40,000.00 per steamer, but the Owner in any event guarantees the Contractor a profit of $40,000.00 on each completed steamer, payable to the Contractor when such steamer is delivered to and accepted by the Owner.

The Owner assumes no responsibility for inability to obtain or have delivered the plant or ways, or any part thereof.

Actual cost.—For the purposes of this contract, the actual cost shall be generally as defined in the United States Revenue bill of September 8, 1916, section 302, in so far as the requirements of said revenue bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in paragraphs (*b*) to (*e*) of this article and all items under paragraphs (*f*) and (*g*) shall, as far as possible, be submitted to the Owner in advance for its approval, and no item so submitted in advance and disapproved by the Owner shall be payable to the Contractor.

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building or construction of the steamers and other direct charges (such as insurance on the steamers).

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs and maintenance, light, heat, power, insurance (including liability and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property (account being taken of exceptional depreciation of extensions, increases, and additions to plant and property specially acquired for or devoted to the manufacture or erection of the work or the construction of the steamer under this contract, provided the same have not been paid for by the Owner under (*g*).

(*g*) The cost of labor, materials, machinery, equipment, and supplies (other than real estate) for the extensions, increases, and additions to plant and property of the Contractor authorized by the Owner specially acquired for or devoted to the building or construction of the steamers under this contract, and rentals actually paid for such establishments, extensions, increases, and additions authorized by the Owner.

Physical property and unexpired leases represented by items of cost included in paragraph (*g*), supra, paid for by the Owner shall continue to be the Owner's property after termination of this contract, but may be purchased by the Contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals as general manager of the Owner or his successors in such office (herein called "the General Manager"), and his decision shall (except as hereinafter stated) be binding on both parties. Wherever possible, he will lay down in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the Contractor. He will determine methods to be followed by the Contractor in preparing bills and by engineers and auditors in certifying to them, and will determine the items which must be referred for his decision. He will, so far as possible, determine in advance the ratio of amortization referred to in paragraph (*f*) supra and allowances to be made for indirect charges.

Naval architect.—The Owner will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these steamers. They and their assistants, described herein as the Owner's inspectors, will represent the Owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as the representative of the Owner and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the Owner shall be binding, subject in all cases to appeal to the General Manager of the Owner.

Auditors.—The Owner may send an auditor to the works of the Contractor to supervise and assist in the accounting.

The accounts and records of the Contractor shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the Contractor in such form as may be required by the General Manager. No change shall be required in the present methods and principles of keeping costs by the Contractor provided the General Manager deems them adequate for the determination of actual costs. All information obtained from Contractor's accounts and records shall be treated as confidential.

Time of payments.—Payments shall be made to the Contractor by the Owner monthly within 15 days after the submission of bills to cover the approved actual cost for the previous months, as defined under paragraphs (*a*) to (*e*), inclusive, and together with the additional approved actual cost, as defined under paragraphs (*f*) and (*g*).

No payment shall be made except when bills are certified by one of the Owner's inspectors or an auditor. Final approval of all bills by such inspectors or auditors shall be necessary for payment.

Orders.—The Owner shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of and extensions, increases, and additions to plants and property), and all contracts and orders placed by the Contractor shall be in the name of the Owner by the Contractor as agent, and it is understood that the Contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the Owner.

Inspectors' certificates.—Every facility shall be afforded by the Contractor to the Inspectors appointed by the Owner, and in the event the Contractor shall order any material without the Owner's approval, it shall be the duty of such inspectors either personally or by deputies to inspect such materials and to accept such materials as are in conformity with specifications and promptly to reject all materials which do not comply with specifications, such condemnation, if any, of such materials to be made by such inspectors before the same are worked or put into the construction, if opportunity to do so is afforded by the Contractor. Said inspectors shall also have the right of rejection after such materials are worked or put into construction if facilities are not given for inspection prior thereto.

III. *Alterations.*—The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions not materially affecting the general design of the steamer as the Owner may deem necessary. The Contractor agrees to accede to and carry the same into effect as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, the dispute shall be determined as provided by Article VII hereof. If the Contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the Owner, or by reason of alterations or additions by the Owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the Contractor but not delivered, or by reason of strikts, fire, lightning, earthquakes, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the Owner under Article XI hereof, or any other cause beyond the control of the Contractor beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The Contractor will, during the progress of the work on said steamers, and until delivery of them, place and maintain insurance on each of them in proper amount by companies approved by the Owner to cover work done and materials on hand for or appropriate to the use of the steamers in and about the premises of the Contractor. Such insurance shall provide against fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the Owner, not less than the sum of the payments made under this contract from time to time, provided that the amount of insurance required shall not at any time exceed the amount

available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the Owner for the use of the Owner and the Contractor as interest may appear.

V. *Forfeiture.*—In case of failure or omission of the Contractor at any stage of the work prior to completion from any cause or causes to go forward with the work and make progress toward its completion satisfactory to the Owner, the Owner may declare this contract forfeited. In that event the Owner may immediately enter the works and premises of the Contractor and take possession of the steamers and materials and equipment. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the steamers and of all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board, the Owner may proceed with the completion of the steamers in accordance with this contract either at the works of the Contractor with its equipment, yard, and facilities or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner shall thus cause this contract to be forfeited the amount to be paid hereunder shall be the actual cost (as defined in Article II hereof), unless theretofore paid, plus a reasonable rental for the appliances, yards, and facilities of the Contractor which, after said forfeiture, are used by the Owner, not to exceed the agreed profit aforesaid.

Provided, however, That if the Contractor can show to the satisfaction of the general manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which he had no control, the Contractor shall be allowed such opportunity as the general manager of the Owner may deem reasonable to complete the work within the time prescribed by this contract.

VI. *Title.*—It is agreed that as the payments provided for herein are made by the Owner on account of materials ordered by or assembled or set up in the yard of the Contractor, or used in the construction hereunder, the same to the extent of the payments made shall become the property of the Owner. Nothing contained herein, however, shall be construed as a waiver by the Owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract, or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the general manager of the Owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case, after delivery of a completed steamer to the Owner under this contract (but only in that event), the Contractor shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind and shall give notice to the Owner to that effect within 30 days after delivery or after final payment by the Owner, such matter shall be determined by a Board which shall consist of three naval architects or engineers or experts, to be appointed, one by he Owner, one by the Contractor, and one by the American Bureau of Shipping. Such Board shall within 30 days after submission of such matter to it determine what, if any, further sum shall be due by the Owner to the Contractor hereunder on account of such delivered steamer, and its finding (made by a majority of the Board) shall be conclusive on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essence of this contract. The Contractor agrees to commence and carry through to completion the work under this contract with dispatch, and that it will not enter into any other contract or undertake any other work or service at its yards which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. *Liens.*—The Contractor shall keep the steamers in course of construction free and clear from all claims, liens, or any encumbrances of any kind or description, and shall before delivery show to the satisfaction of the Owner

that the steamers are free and clear from every claim, lien, and encumbrance, except claim or lien of the Contractor.

X. *Claims and patents.*—The Contractor shall be responsible for all claims, if any, made against the Owner for any infringement of patents or patent rights and for the use of any patented articles and shall defend and save harmless and indemnify the Owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringement of patents or patent rights, or of the use of any patented articles, provided that the Owner will, in all instances, notify the Contractor of any claims made against it by reason of any such infringement or use of patented articles, at the time when such claim is made, and will promptly notify the Contractor of any suit or suits brought against it therefor and give the Contractor an opportunity to defend the same, and provided that no payment shall be made by the Owner unless with the consent of the Contractor or pursuant to a decree by a proper court in such litigation, and provided that the Contractor shall not be liable in the event the Owner specifically order the use of the patent or patented article, whether or not the existence of the patent be known to the parties hereto.

XI. *Labor.*—The Contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the Owner.

XII. *Not assignable.*—This contract may not be assigned by the Contractor without the consent of the Owner in writing, provided, however, that nothing in this contract shall be construed as prohibiting the assignment of payments due, or to become due, to the Contractor for the purpose of obtaining credit for furthering the construction hereby undertaken, but the Owner may by writing make such prohibition, and it is further understood that this contract may be assigned to a corporation to be formed by the Contractor after the financial standing of such corporation shall have been approved by the Owner.

XIII. Payments hereunder required to be made direct to the Contractor shall be made by the Owner by check addressed to the Contractor by mail at Multnomah Hotel, Portland, Oregon.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

[SEAL.] GRANT SMITH-PORTER-GUTHRIE CO.,
By ANDREW R. PORTER, *President.*

JULY 1, 1917.
Attest:
F. E. BLACKMORE, *Assistant Secretary.*

Countersigned:
E. V. HAUSER, *Director.*

[SEAL.] UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
By WILLIAM DENMAN, *President.*

Attest:
GEO. H. SAVAGE, *Secretary.*

CONTRACT FOR CONSTRUCTION OF COMPLETE NONSTANDARD TYPE SHIPS—LUMP-SUM BASIS.

[Contract No. 5. Hull Nos. 35–38, inclusive. J. P. C. May 16.]

Contract made this 15th day of May, 1917, between Peninsula Shipbuilding Company, party of the first part (herein called the Contractor), and the United States Shipping Board Emergency Fleet Corporation, party of the second part (herein called the Owner).

For valuable considerations and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done.*—The Contractor hereby agrees to construct in accordance with the drawings and specifications approved by Theodore E. Ferris for this contract, hereto attached and hereby made a part of this contract, under the Rules and Regulations of the American Bureau of Shipping, prescribed for the highest classification, four wooden cargo vessels complete in all respects, including propelling machinery auxiliaries and all other necessary fittings and equipment. The Contractor will furnish such engineering service as may be

necessary to construct said vessels and install machinery and equipment, the same to be included as part of actual cost hereunder. The Contractor agrees to deliver said completed vessels to the Owner afloat at the works of the Contractor at Portland, Oreg., on or before the following dates: No. 1, February 15, 1918; No. 2, March 15, 1918; No. 3, April 15, 1918; No. 4, May 15, 1918.

The Owner may, from time to time, by instruction in writing, make such changes and alterations in the drawings and specifications not materially affecting the general design of the vessels as it may deem necessary. If such change shall delay completion of the work, then the Contractor is to be allowed additional time sufficient to cover such delay.

II. *Payment.*—The purchase price to to be paid by the Owenr is Five hundred thousand Dollars per ship, to be paid as hereinafter provided. The Owner, however, guarantees the Contractor a profit of Forty thousand dollars on each completed ship. The Contractor agrees that the Owner may withhold from said purchase price of five hundred thousand dollars per ship any amount over the actual cost of the work plus forty thousand dollars (so that the Contractor's profit on each completed ship shall be limited to forty thousand dollars).

For the purposes of this contract, the actual cost shall be generally as defined in the United States Revenue Bill of September 6th, 1916, Section 302, in so far as the requirements of said Revenue Bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in paragraphs (*b*) to (*e*) of this article and all items under paragraphs (*f*) and (*g*) shall, as far as possible, be submitted to the Owner in advance for its approval, and no item so submitted in advance and disapproved by the Owner shall be payable to the Contractor.

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building or construction of the vessel, and other direct charges, such as insurance on vessels.

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs and maintenance, light, heat, power, insurance (including liability and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property (account being taken of exceptional depreciation of extensions, increases, and additions to plant and property specially acquired for or devoted to the manufacture or erection of the work or the construction of the vessel under this contract provided the same have not been paid for by the Owner under (*g*)).

(*g*) The cost of labor materials, machinery equipment, and supplies (other than real estate) for the establishment of and extensions, increases, and additions to plant and property of the Contractor authorized by the Owner specially acquired for or devoted to the building or construction of the vessels under this contract and rentals actually paid for such establishments, extensions, increases, and additions authorized by the Owner.

The guaranteed profit shall be paid on each ship in two installments, (*a*) the first twenty thousand dollars ($20,000) on launching of the hull, and (*b*) the second twenty thousand dollars ($20,000) on delivery of the ship to the Owner.

Physical property represented by items of cost included in paragraph (*g*) supra paid for by the Owner shall continue to be Owner's property after termination of this contract, but may be purchased by the Contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals, as General Manager of the Owner or his successors in such office (herein called the General Manager), and his decision shall (except as hereinafter stated) be bind-

ing on both parties. Wherever possible he will lay down in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the Contractor. He will determine methods to be followed by the Contractor in preparing bills and by engineers and auditors in certifying to them and will determine the items which must be referred for his decision. He will so far as possible determine in advance the ratio of amortization referred to in paragraph (*f*) supra, and allowances to be made for indirect charges.

Naval architect.—The Owner will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these vessels or hulls. They and their assistants, described herein as the Owner's inspectors, will represent the Owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as the representative of the Owner, and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the Owner shall be binding, subject in all cases to appeal to the General Manager of the Owner.

Auditors.—The Owner may send an auditor to the works of the Contractor to supervise and assist in the accounting.

The accounts and records of the Contractor shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the Contractor in such form as may be required by the General Manager. No change shall be required in the present methods and principles of keeping costs by the Contractor provided the General Manager deems them adequate for the determination of actual costs. All information obtained from Contractor's accounts and records shall be treated as confidential.

Time of payments.—Payments shall be made to the Contractor by the Owner monthly within fifteen days after the submission of bills to cover the approved actual cost for the previous month as defined under paragraphs (*a*) to (*e*), inclusive, and together with the additional approved actual cost as defined under paragraphs (*f*) and (*g*).

No payment shall be made except when bills are certified by one of the Owner's engineers or an auditor. Final approval of all bills by such engineers or auditors shall be necessary for payments.

Title to property.—The vessels, as they are constructed, together with all materials, machinery, equipment, and supplies brought upon the premises of the Contractor where the work of construction is being done, shall, as from time to time paid for, immediately become the property of the Owner.

III. *Materials.*—The materials to be used by the Contractor in the construction of the vessels under this contract shall be of quality and characteristics best adapted to the purposes for which they may be used, and shall conform to the specifications annexed to this contract. The materials and workmanship used and applied in construction hereunder shall be first-class and shall from beginning to end be subject to inspection of the Owner's engineers. Such engineers shall at all times during the progress of the work have full access thereto.

Orders.—The Owner shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of extensions, increases, and additions to plant and property) and all contracts and orders placed by the Contractor may be in the name of the Owner by the Contractor as agent, and it is understood that the Contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the Owner.

The number and class of men engaged on the work (including establishment of extensions, increases, and additions to plant and property), the hours of labor, methods of work, and terms of employment shall be subject to the approval and direction of the General Manager of the Owner.

IV. *Fire protection.*—The Contractor shall provide adequate fire protection in the way of pumps, hydrants, hose, etc., to the satisfaction of the Owner's engineers, and maintain an adequate system of watching to comply with ordinary Underwriters' requirements (such expenses to be an item of actual cost as herein defined).

Insurance.—The Contractor will, during the progress of the work on said vessels and until delivery of them, place and maintain insurance on each of

them in proper amount by companies approved by the Owner to cover work done and materials on hand for or appropriate to the use of the vessels in and about the premises of the Contractor. Such insurance shall provide against fire and marine risks, lightning, settling of stocks, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the Owner, not less than the sum of the payments made under this contract from time to time, provided that the amount of insurance required shall not at any time exceed the amount available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the Owner for the use of the Owner and the Contractor as interest may appear.

V. *Liens.*—The Contractor shall keep the vessels in course of construction free and clear from all claim, liens, or any incumbrances of any kind or description and shall before delivery show to the satisfaction of the Owner that the vessels are free and clear from every claim, lien, and incumbrance except claim or lien of the Contractor.

VI. *Forfeiture.*—In case of failure or omission of the Contractor at any stage of the work prior to completion from any cause or causes to go forward with the work and make progress towards its completion satisfactory to the Owner, the Owner may declare this contract forfeited. In that event the Owner may immediately enter the works and premises of the Contractor and take possession of the vessels and materials and equipment. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the vessels and of all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board, the Owner may proceed with the completion of the vessels in accordance with this contract either at the works of the Contractor with its equipment, yard, and facilities or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner shall thus cause this contract to be forfeited, the amount to be paid hereunder shall be the actual cost (as defined in Article II hereof) of the Contractor plus a reasonable rental for the appliances, yards, and facilities of the Contractor which, after said forfeiture, are used by the Owner.

VII. *Assignment.*—This contract shall not, nor shall any interest herein, be transferred by the Contractor to any other person or persons save with the consent of the Owner from time to time obtained.

VIII. *Disputes.*—If any doubt or dispute arises as to the meaning or effect of this contract, or the drawings or specifications which are a part hereof, or if any discrepancy occurs, the matter shall be promptly referred to the General Manager, and his decision in the premises shall be conclusive and binding upon both parties.

In case after delivery of a completed vessel to the Owner under this contract (but only in that event) the Contractor shall deem that it is aggrieved by any decision of the General Manager either as to actual cost or as to any disputed matter hereunder of any kind and shall give notice to the Owner to that effect within thirty days after delivery or after final payment by the Owner, such matter shall be determined by a Board which shall consist of three naval architects or engineers or experts to be appointed, one by the Owner, one by the Contractor, and one by the American Bureau of Shipping. Such Board shall within thirty days after submission of such matter to it determine what if any further sum shall be due by the Owner to the Contractor hereunder on account of such delivered vessel, and its finding (made by a majority of the board) shall be conclusive on both parties.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

[SEAL.] PENINSULA SHIPBUILDING COMPANY,
By F. C. KNAPPS, *President.*

Attest:
JAMES B. KERR, *Secretary.*

[SEAL.] UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION.
By WILLIAM DENMAN.

Attest:
GERARD C. HENDERSON, *Secretary.*

CONTRACT FOR CONSTRUCTION OF STANDARD TYPE COMPLETE HULL—COST-PROFIT SHARING.

[Contract No. 11. Hull No. 89–98, inclusive.]

Contract made this 4th day of June, 1917, between Sanderson and Porter, a copartnership, party of the first part (herein called the Contractor), and United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia, party of the second part (herein called the Owner).

For valuable consideration, the receipt of which is hereby acknowledged by both parties, and in consideration of the mutual promises of the parties, it is agreed as follows:

I. *Work to be done—Deliveries.*—The Contractor hereby agrees to construct, in accordance with the standard drawings and specifications of the Owner hereto attached and hereby made a part of this contract, under the rules and regulations of the American Bureau of Shipping, ten (10) wood cargo-carrying hulls suitable for cargo-carrying steamers. The Contractor agrees to deliver said hulls according to said drawings and specifications to the Owner afloat at the works of the Contractor on Willapa Harbor, as follows: The first hull to be delivered on or before April 1, 1918, and the remaining number of hulls to be delivered as follows: One hull every following fifteen days, the last hull to be delivered August 30, 1918.

II. In consideration of the performance of this agreement by the Contractor the Owner agrees to pay therefor a lump sum estimated to be $300,000 for each such completed hulls; such purchase price to be the actual cost of the work plus the Contractor's profit as hereinafter provided.

The Owner guarantees the Contractor a profit of $20,000 on each completed hull, payable to the Contractor when such hull is delivered to and accepted by the Owner. The Contractor agrees that the Owner may withhold from said purchase price of $300,000 per hull any amount over the actual cost of the work plus $20,000 (so that the Contractor's profit on each hull shall be limited to $20,000).

The Owner assumes no responsibility for inability to obtain or have delivered the plant or ways, or any part thereof.

Actual cost.—For the purposes of this contract the actual cost shall be generally as defined in the United States Revenue bill of September 8, 1916, section 302, in so far as the requirements of said revenue bill are applicable to and not inconsistent herewith.

The actual cost shall include the following and items similar thereto in principle, provided that all items of overhead or indirect cost included in paragraphs (*b*) and (*c*) of this article and all items under paragraphs (*f*) and (*a*) shall, as far as possible, be submitted to the Owner in advance for its approval, and no item so submitted in advance and disapproved by the Owner shall be payable to the Contractor:

(*a*) The cost of labor and materials, machinery, equipment, and supplies entering into the building or construction of the hulls and other direct charges (such as insurance on the hulls).

(*b*) A proper proportion of running expenses, including ordinary rentals, cost of repairs, and maintenance, light, heat, power, insurance (including liability and compensation insurance), management, salaries, and other indirect charges.

(*c*) A proper proportion of interest accrued and paid on debts or loans contracted to meet the needs of the business and the proceeds of which have been actually used to meet such needs.

(*d*) A proper proportion of taxes of all kinds accrued and paid with respect to the business or property.

(*e*) A proper proportion of losses actually sustained in connection with the business, including losses from fire, flood, storm, riot, vandalism, any act of God, acts of war, or other casualties, and not compensated for by insurance or otherwise.

(*f*) A reasonable allowance, according to the conditions, for depreciation of values of plant and property (account being taken of exceptional depreciation of exceptional depreciation of extensions, increases, and additions to plant and property specially acquired for or devoted to the manufacture or erection of the work or the construction of the hull under this contract provided the same have not been paid for by the Owner under (*g*).

(*g*) The cost of labor, materials, machinery, equipment, and supplies (other than real estate) for the establishment of and extensions, increases, and additions to plant and property of the Contractor authorized by the Owner specially acquired for or devoted to the building or construction of the hulls under this contract and rentals actually paid for such establishments, extensions, increases, and additions authorized by the Owner.

Physical property and unexpired leases represented by items of cost included in paragraph (*g*), supra, paid for by the Owner shall continue to be the Owner's property after termination of this contract but may be purchased by the Contractor at such termination at a valuation to be agreed upon.

Determination of cost.—The determination of the actual cost as above defined shall be made by and under the direction of George W. Goethals as general manager of the Owner, or his successors in such office (herein called "the General Manager"), and his decision shall (except as hereinafter stated) be binding on both parties. Wherever possible he will lay down in advance the methods to be followed in ascertaining and determining the actual cost, and where this can not be done will act on claims submitted by the Contractor. He will determine methods to be followed by the Contractor in preparing bills and by engineers and auditors in certifying to them, and will determine the items which must be referred for his decision. He will, so far as possible, determine in advance the ratio of amortization referred to in paragraph (*f*), supra, and allowances to be made for indirect charges.

Naval architect.—The Owners will employ one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these hulls. They and their assistants, described herein as the Owners' inspectors, will represent the Owners and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as the representative of the Owner and to him shall be referred all questions arising under the contract at the works. His decision on all questions when rendered under his general authority or after approval by the Owner shall be binding, subject in all cases to appeal to the general manager of the Owner.

Auditors.—The Owner may send an auditor to the works of the Contractor to supervise and assist in the accounting.

The accounts and records of the Contractor shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the Contractor in such form as may be required by the general manager. No change shall be required in the present methods and principles of keeping costs by the Contractor, provided the general manager deems them adequate for the determination of actual costs. All information obtained from Contractor's accounts and records shall be treated as confidential.

Time of payments.—Payments shall be made to the Contractor by the Owner monthly within 15 days after the submission of bills to cover the approved actual cost for the previous months as defined under paragraphs (*a*) to (*e*), inclusive, and together with the additional approved actual cost, as defined under paragraphs (*f*) and (*g*).

No payment shall be made except when bills are certified by one of the Owner's inspectors or an auditor. Final approval of all bills by such inspectors or auditors shall be necessary for payment but shall not be unreasonably withheld or delayed.

Orders.—The Owners shall have full control of all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of and extensions, increases, and additions to plants and property), and all contracts and orders placed by the Contractor shall be in the name of the Owner by the Contractor as agent, and it is understood that the Contractor shall assume no pecuniary liability under or by reason of such obligations where made with the written approval of the Owner.

Inspector's certificates.—No inspector's certificate given or payment made under the terms of this contract (except on final payment), shall be conclusive evidence of the performance of this contract, either in whole or in part, and no payment shall be construed to be an acceptance of defective work or improper materials. Every facility shall be afforded by the Contractor to the inspectors appointed by the Owner. It shall be the duty of such inspectors, either personally or by deputies, to inspect all materials and workmanship entering into the construction, and to accept such materials and/or workmanship as are in

conformity with specifications, and promptly to reject all materials and all workmanship which do not comply with the specifications; such condemnation, if any, of materials to be made by such inspectors before the same are worked or put into construction, if opportunity so to do is afforded by the Contractor. Said inspectors shall also have the right of rejection after material is worked or put into construction if facilities are not given for inspection prior thereto.

III. *Alterations.*—The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions not materially affecting the general design of the steamer as the Owner may deem necessary. The Contractor agrees to accede to and carry the same into effect, as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. In case the parties are unable to agree as to the effect of such alterations, omissions, additions, and substitutions, the dispute shall be determined as provided by Article VII hereof. If the Contractor be delayed or obstructed in the transaction or completion of the work provided for by this contract by the delay, neglect, or default of the Owner, or by reason of alterations or additions by the Owner, or the commandeering by the United States Government of materials on the ground or materials purchased by the Contractor but not delivered, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by reason of instructions given by the Owner under Article XI hereof, beyond the time herein fixed, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof. In the event that parties shall not agree as to such extension, such extension shall be determined in accordance with Article VII hereof.

IV. *Insurance.*—The Contractor will during the progress of the work on said hulls and until delivery of them place and maintain insurance on each of them in proper amount by companies approved by the Owner to cover work done and materials on hand for or appropriate to the use of the hulls in and about the premises of the Contractor. Such insurance shall provide against fire and marine risks, lightning, settling of staging, breakage of ways, and risks of launching, and shall be for an amount to be fixed by the Owner, not less than the sum of the payments made under this contract from time to time, provided that the amount of insurance required shall not at any time exceed the amount available in the insurance market. The policies shall provide that the loss, if any, shall be paid to the Owner for the use of the Owner and the Contractor as interest may appear.

V. *Forfeiture.*—In case of failure or omission of the Contractor at any stage of the work prior to completion from any cause or causes to go forward with the work and make progress toward its completion satisfactory to the Owner the Owner may declare this contract forfeited. In that event the Owner may immediately enter the works and premises of the Contractor and take possession of the hulls and materials and equipment. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the hulls and of all materials on hand applicable thereto. On filing of such statement and inventory with the United States Shipping Board the Owner may proceed with the completion of the hulls in accordance with this Contract either at the works of the Contractor with its equipment, yard, and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner shall thus cause this contract to be forfeited the amount to be paid hereunder shall be the actual cost (as defined in Article II hereof) unless theretofore paid, plus a reasonable rental for the appliances, yards, and facilities of the Contractor which, after said forfeiture, are used by the Owner, not to exceed the agreed profit aforesaid: *Provided, however,* That if the Contractor can show to the satisfaction of the general manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which he had no control, the Contractor shall be allowed such opportunity as the general manager of the Owner may deem reasonable to complete the work within the time prescribed by this contract.

VI. *Title.*—It is agreed that as the payments, provided for herein, are made by the Owner on account of materials ordered by or assembled or set up in the yard of the Contractor or used in the construction hereunder, the same to the extent of the payments made shall become the property of the Owner. Nothing

contained herein, however, shall be construed as a waiver by the owner of its right to object if the terms of this contract have not been complied with, nor construed as acceptance of any work which fails to fulfill the requirements of this contract.

VII. *Disputes.*—In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning or effect of this contract or of the drawings and specifications which are a part hereof, or as to the manner of doing the work provided hereunder, or as to materials used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by George W. Goethals, the general manager of the Owner, or his successor at the time in office, and his decision shall be final and binding upon the parties.

In case after delivery of a completed hull to the Owner under this contract (but only in that event) the Contractor shall deem that it is aggrieved by any decision of the general manager as to any disputed matter hereunder of any kind and shall give notice to the Owner to that effect within 30 days after delivery or after final payment by the Owner, such matter shall be determined by a Board which shall consist of three naval architects or engineers or experts to be appointed, one by the Owner, one by the Contractor, and one by the American Bureau of Shipping. Such Board shall within 30 days after submission of such matter to it determine what, if any, further sum shall be due by the Owner to the Contractor hereunder on account of such delivered hull, and its finding (made by a majority of the Board) shall be conclusive on both parties.

VIII. *Time of essence.*—It is agreed by both parties that time is of the essence of this contract. The Contractor agrees to commence and carry through to completion the work under this contract with dispatch, and that it will not enter into any other contract or undertake any other work or service at its yards which will interfere in any material manner with the completion of the work undertaken hereunder.

IX. *Liens.*—The Contractor shall keep the hulls in course of construction free and clear from all claims, liens, or any encumbrances of any kind or description, and shall before delivery show to the satisfaction of the Owner that the hulls are free and clear from every claim, lien, and encumbrance, except claim or lien of the Contractor.

X. *Claims and patents.*—The Contractor agrees to protect the Owner from all claims arising from accidents or casualties to employees or workmen on or about the work covered by this contract, and to indemnify the Owner against the same.

The Contractor shall be responsible for all claims, if any, made against the Owner for any infringements of patents or patent rights and for the use of any patented articles, and shall defend and save harmless and indemnify the Owner against all such claims, and from all costs, expenses, and damages which it may be obliged to pay by reason of any such infringement of patents or patent rights, or of the use of any patented articles, provided, that the Owner will, in all instances, notify the Contractor of any claims made against it by reason of any such infringement or use of patented articles at the time when such claim is made, and will promptly notify the Contractor of any suit or suits brought against it therefor and give the Contractor an opportunity to defend the same, and provided that no payment shall be made by the Owner unless with the consent of the Contractor or pursuant to a decree by a proper court in such litigation, and provided that the Contractor shall not be liable in the event the Owner specifically orders the use of the patent or patented article, whether or not the existence of the patent be known to the parties hereto.

XI. *Labor.*—The Contractor will comply with all instructions as to wages or conditions of employment of labor on this contract given to it in writing by the Owner.

XII. *Not assignable.*—This contract may not be assigned by the Contractor without the consent of the Owner in writing, provided, however, that nothing in this contract shall be construed as prohibiting the assignment of payments due, or to become due, to the Contractor for the purpose of obtaining credit for furthering the construction hereby undertaken, but the Owner may by writing make such prohibition, and it is further understood that this contract may be assigned to a corporation to be formed by the Contractor, after

the financial standing of such corporation shall have been approved by the Owner.

XIII. Payments hereunder required to be made direct to the Contractor shall be made by the Owner by check addressed to the Contractor by mail at 52 William St., New York.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

[SEAL.] SANDERSON & PORTER,
By H. HOBART PORTER.

Attest:
——— ———, *Secretary.*

Countersigned:
——— ———, *Director.*

[SEAL.] UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
By WILLIAM DENMAN, *President.*

Attest:
GERARD C. HENDERSON, *Secretary.*

The CHAIRMAN (continuing). This morning I received some telegrams on the subject of housing employees of shipyards. One of them is from Mr. L. C. Irvine, of Mobile, Ala., and the other is from H. J. North, of Lombard, Ill. They both make suggestions as to methods for carrying out the plans for providing housing for workers in shipyards. The telegrams are both brief, and, without objection, they will be inserted in the printed record for the information of the committee.

(The telegrams referred to are here printed in full, as follows:)

CHICAGO, ILL., *3.04 p. m., January 9, 1918.*

Senator FLETCHER,
Chairman Emergency Housing Committee, Washington, D. C.:

Regarding housing emergency for men at shipyards, I suggest fabricating portable buildings. I know plants adapted to this work, and men now idle can produce 75 to 100 buildings per day immediately. Plans for conserving materials permitting rearrangement for permanent homes, and my service is at your disposal.

H. J. NORTH, *Lombard, Ill.*

MOBILE, ALA., *10.30 a. m., January 9, 1918.*

Senator FLETCHER,
Washington, D. C.:

Subject housing shipbuilders, suggest 5 per cent loan on cost of house, amortized where congestion is coming but not acute. Such plan will prevent congestion. Am ready with land for 1,000 houses, but Government entering building business at other ports will cause capital to withdraw. Government loans would stimulate.

L. C. IRVINE.

Senator JONES. Mr. Chairman, as Mr. Piez, the general manager of the Fleet Corporation, is present, I suggest that he be requested to furnish the committee with lists of employees of the Shipping Board and the Emergency Fleet Corporation, with their salaries.

Mr. PIEZ. I will be very glad to furnish such a list, Mr. Chairman.

The CHAIRMAN. The lists of employees of the Shipping Board and the Emergency Fleet Corporation, with their salaries, which Mr. Piez will furnish, will be inserted at this point.

(The lists referred to were subsequently furnished by Mr. Piez and are here printed in full, as follows:)

Compensation of employees of the United States Shipping Board.

[In service prior to Nov. 20, 1917.]

Name.	Designation.	Legal residence.	Appointed 1917.	Rate per annum.
Edward B. Burling	Chief counsel	Illinois	Aug. 13	$7,000
Alfred Huger	Admiralty counsel	South Carolina	June 8	5,000
Harold H. Ebey	Special expert	California	June 13	5,000
Charles Yates	do	Ohio	Mar. 12	5,000
William L. Soleau	Chief clerk, disbursing officer.	District of Columbia	Feb. 8	4,000
Otis Beall Kent	Attorney-examiner	Massachusetts	Apr. 28	4,000
Harold V. Amberg	Attorney	Illinois	Sept. 19	4,000
Howard Gans	do	New York	do	4,000
W. H. A. Walker	Special expert	New Jersey	Aug. 27	3,600
John E. Barber	Examiner	New York	July 27	3,600
Frank B. Lord	do	do	Aug. 23	3,600
Gerard C. Henderson	Attorney	Massachusetts	Mar. 19	3,000
Richard H. Bailey, jr	Clerk to commissioner	District of Columbia	Apr. 5	2,400
Everett W. Hawkins	do	Pennsylvania	Feb. 16	2,400
Kathleen Lawler	do	Michigan	Nov. 16	2,400
Louis Levy	do	New Hampshire	Mar. 3	2,400
Roy H. Morrill	do	Massachusetts	Feb. 16	2,400
Frank W. Seth	Special expert	Maryland	Apr. 14	2,400
Edgar S. Coffey	Attorney	North Carolina	May 11	2,400
Walter R. Alexander	do	Missouri	Feb. 14	2,100
Charles S. Brock	Clerk	Florida	June 2	2,100
Benjamin V. Cohen	Attorney	Illinois	Aug. 1	2,000
Whitney H. Shepardson	do	New York	May 2	2,000
Joseph A. Scannell	Purchasing clerk	Massachusetts	Oct. 3	2,000
B. Leslie Vipond	Accountant	New York	Aug. 21	1,800
James E. Bragg	Clerk	Indiana	do	1,800
Wm. W. Houseknecht	do	Pennsylvania	May 8	1,800
John J. Flaherty	do	New York	Apr. 26	1,620
Francis G. Gardiner	do	Alabama	Oct. 30	1,600
Maurice J. Pierce	do	Tennessee	Nov. 3	1,600
William M. Woods	do	Massachusetts	May 24	1,600
William R. Fitch	Assistant examiner	North Dakota	Mar. 15	1,500
Henry E. Manghum	do	Oregon	May 11	1,500
Jerry C. Massey	do	Oklahoma	May 25	1,500
Joseph N. Welch	do	Massachusetts	June 10	1,500
Elbert C. Gearhart	Clerk	Maryland	Sept. 21	1,500
Ulric J. Gendron	do	Massachusetts	May 14	1,500
Lloyd F. Orrison	do	Virginia	Sept. 10	1,500
Harrison V. Rouse	do	do	Apr. 16	1,500
Clifton J. Hicks	do	Missouri	Oct. 30	1,400
Corral H. Hunt	do	Ohio	July 26	1,400
Lloyd R. Roberts	do	Iowa	Aug. 27	1,400
Helen E. Naumann	Stenographer	Illinois	Oct. 31	1,400
Charles H. Howell	Accountant	Washington	Aug. 25	1,320
Charles W. G. Brett	Clerk	New Hampshire	May 15	1,320
William D. Weist, jr	do	Ohio	Mar. 19	1,320
Clarence G. Clark	Stenographer	New Jersey	July 16	1,200
Libbie A. Pexa	do	Florida	Nov. 1	1,200
Fred A. Quinn	do	Pennsylvania	Sept. 5	1,200
Frank H. Renaud	do	Illinois	Aug. 16	1,200
Charles T. Rippy	do	Tennessee	Aug. 30	1,200
John A. Russell	do	Michigan	June 18	1,200
Charles E. Schuyler	do	District of Columbia	Sept. 1	1,200
Morris S. Schwartz	do	North Carolina	Apr. 28	1,200
George P. Shaw	do	California	July 6	1,200
Eleanor M. Wadsworth	do	District of Columbia	Aug. 3	1,200
John Wilt	do	New Jersey	Aug. 13	1,200
Valentine G. Bretzer	Clerk	New York	Sept. 24	1,200
Blanton J. Brown	do	Georgia	Feb. 13	1,200
Kate F. Butler	do	District of Columbia	Nov. 7	1,200
Jay Goux	do	New York	Oct. 16	1,200
Charles B. Gray	Stenographer	Pennsylvania	Feb. 17	1,080
Pauline V. Reilly	do	District of Columbia	Oct. 22	1,020
Celia Glazer	do	New York	Nov. 1	1,000
Mary M. Mahoney	do	Connecticut	Aug. 6	1,000
Anna M. Scott	do	Pennsylvania	Oct. 26	1,000
Francis H. Espev	do	Maryland	Oct. 23	900
Joseph A. Granahan	Clerk	Pennsylvania	Sept. 24	900
John W. Roehling	do	Missouri	Oct. 27	900
Isabelle M. Jones	Telephone operator	New York	Feb. 16	840
Josephine I. Kellogg	do	do	Apr. 30	840
T. Henry Deckleman	Assistant messenger	Maryland	Sept. 24	720
Carol R. Boss	Messenger boy	District of Columbia	Sept. 18	540
Kenneth C. Marshall	do	Ohio	Mar. 19	540

Compensation of employees of the United States Shipping Board—Continued.

Name.	Designation.	Legal residence.	Appointed 1917.	Rate per annum.
Frederick D. Mohler	Messenger boy	District of Columbia	Feb. 17	$540
Richard T. Tracy	do	do	Sept. 14	540
Edward J. Cobb	do	do	Aug. 6	480
Raymond E. Deery	do	do	Nov. 7	480
Samuel E. Entriken	do	do	Aug. 6	480
Charles B. Hobbs	do	do	Sept. 22	480
William T. A. Kieny	do	Virginia	Nov. 15	480
Grant Pierro	do	District of Columbia	Oct. 19	480
Robert Timberlake	do	do	Oct. 15	420

List of officers and employees of the United States Shipping Board Emergency Fleet Corporation, with their salaries, Jan. 1, 1918.

Division.	Total employees.	Salaries.
Executive	11	$30,802.00
Information and files	34	40,300.00
Stenographic department	92	107,280.00
Personnel department	12	13,320.00
Statistical department	14	17,860.00
Department of office equipment, printing and stationery	9	10,260.00
Mail department	13	12,680.00
Messenger department	51	32,240.00
Department provisions and maintenance of office building	33	19,532.00
Department of library and maps	8	9,120.00
Total	277	293,394.00
Detailed to Shipping Board	3	8,400.00
Division of wood-ship construction, office of manager	3	10,900.00
Division of steel-ship construction:		
Office of manager	9	35,300.00
Technical department	64	201,801.00
General commandeering department	24	40,240.00
Department of inspection and production	14	20,360.00
Industrial service department	25	80,296.00
Total	136	377,997.00
Shipyard plants	22	30,443.00
Division of contracts	5	15,700.00
Legal division	14	40,000.00
Auditing division	29	71,960.00
Division of transportation	30	41,400.00
Purchasing division	120	226,070.00
Lumber department, New Orleans	197	273,500.00
Ship protection general committee	14	4,808.00
Committee on standard ship construction	5	4.00
Shipbuilding labor adjustment board	5	15,002.00
Advisory housing committee	6	5,004.00
Submarine Boat Corporation	14	32,700.00
American International Shipbuilding Corporation	26	53,646.00
Merchants Shipbuilding Corporation	34	70,139.88
American Chain Co	2	4,400.00
Total, home office	942	1,575,467.88
Boston district	53	100,284.00
New York district	51	113,910.00
Baltimore district	45	92,831.00
Jacksonville district	51	83,060.00
New Orleans district	29	52,100.00
Houston district	39	69,000.00
San Francisco district	66	179,220.00
Seattle district	129	281,114.00
Great Lakes district	29	51,481.00
Philadelphia district	65	124,451.00
Total	557	1,147,501.00

SUMMARY.

Total for home office	942	$1,575,467.88
Total for district offices	557	1,147,501.00
	1,499	2,722,968.88

OFFICERS.

Piez, Charles, vice president and general manager	$7,500.00
Ackerson, J. L., assistant to vice president and general manager	Detailed from Navy.
Oller, George E., office manager	4,000.00
Bowles, Francis T., manager, division steel construction	6,000.00
Heyworth, James O., manager, division wood ship construction	7,500.00
Rousseau, Admiral H. H., manager, division shipyard plants	Detailed from Navy.
Radford, George S., manager, division of contracts	7,500.00
Browne, Frank A., general purchasing officer	4,800.00
Bender, D. H., general auditor	6,000.00
Payne, John Barton, general counsel	7,500.00
Joubert, F. C., manager, division of transportation	2,400.00
Blackman, William, manager, division of labor	5,000.00
Tuttle, M. C., manager, division of production	Not determined.
Office of vice president and general manager:	
Yerkes, Richard W., assistant to vice president and general manager	2,700.00
Doane, Maj. P. P. S., assistant to vice president and general manager	1.00
Rogers, Paymaster Gen. E. B., assistant to vice president and general manager	1.00
McCarthy, Charles H., private secretary to vice president and general manager	3,500.00
Tompkins, R. R., secretary to vice president and general manager	2,000.00
Brand, J. Stewart,[1] secretary to manager, division of labor	2,500.00

EXECUTIVE AND ADMINISTRATIVE DIVISION.

Oller, George E.,[1] office manager	4,000.00
Leonard, Laurence, chief clerk	3,600.00
Department of information and files:	
Luedtke, Charles L., head	2,400.00
Martin, George W., assistant	2,000.00
Becker, Fred J., clerk	1,000.00
Brown, Henry P., clerk	900.00
Cannon, J. M., clerk	1,400.00
Block, Alfred G., clerk	1,200.00
Boma, George M., clerk	1,200.00
Burns, William E., clerk	1,200.00
Downs, Daniel C., clerk	1,000.00
Dubois, William, clerk	1,600.00
Dyer, John W., jr., clerk	720.00
Eastwood, Charles, clerk	1,200.00
Heffernan, Daniel J., clerk	900.00
Hodgson, Clifton K., clerk	1,000.00
Howell, Charles D., clerk	900.00
Hurlbut, C. J., clerk	1,000.00
Hurley, John J., clerk	1,200.00
Koeppe, Clarence E., clerk	1,080.00
McClure, James B., clerk	1,200.00
McCreight, Robert F., clerk	1,100.00
McGrath, Everett D., clerk	900.00
Marshall, C. R., clerk	1,200.00
Megill, C. H., clerk	600.00
Repass, M. L., clerk	1,200.00
Riggles, J. Richard, jr., stenographer and typist	1,200.00
Scanlon, Edward, clerk	1,200.00
Schuyler, W. E., clerk	1,200.00
Smith, Charles R., clerk	1,400.00
Smith, Helen A., typist	900.00
Spiegel, Bern L., clerk	1,400.00
Springer, E. L., clerk	1,500.00

[1] Should appear under "Division of Labor."

Department of information and files—continued:	
Taylor, Lawrence B., clerk	$1,500.00
Weakley, Carl V., clerk	1,000.00
Wilson, Dorothy, typist	900.00
Stenographic department:	
Sullivan, James A., head stenographer	2,000.00
Veach, L. S., stenographer	1,800.00
Whitaker, Gertrude, stenographer	1,800.00
Wrenn, Herbert L., stenographer	1,800.00
Frame, W. L., stenographer	1,600.00
McIntyre, F. P., stenographer	1,600.00
French, Charles E., stenographer	1,600.00
Johnson, Ellis A., stenographer	1,500.00
Spaight, Daniel R., stenographer	1,500.00
Cooper, E. W., stenographer	1,600.00
Harding, Lee R., stenographer	1,400.00
Holmes, Joseph B., stenographer	1,500.00
McCray, W. E., stenographer	1,400.00
Marrs, T. C., stenographer	1,400.00
Tanner, Norman D., stenographer	1,400.00
Williams, J. H., stenographer	1,600.00
Eliason, E. E., stenographer	1,300.00
Howorth, B. A., stenographer	1,300.00
Marks, stenographer	1,300.00
Newton, W. S., stenographer	1,300.00
Spaulding, E. M., stenographer	1,300.00
Trudgian, A. B., stenographer	1,300.00
Rabenhorst, W. E., stenographer	1,260.00
Wetzel, Cora M., stenographer	1,250.00
Barry, L. R., stenographer	1,200.00
Cleary, William G., stenographer	1,300.00
Cocke, Laura S., stenographer	1,300.00
Dennean, James A., stenographer	1,200.00
French, Margaret, stenographer	1,200.00
Geilinger, Fred, stenographer	1,400.00
Goodno, David G., stenographer	1,200.00
Heddinger, James D., stenographer	1,200.00
Hoffman, Lillian S., stenographer	1,200.00
Jacobs, Samuel W., stenographer	1,200.00
Kemper, Linc. S., stenographer	1,200.00
McDaniel, Bert B., stenographer	1,300.00
Montress, George M., stenographer	1,200.00
O'Donaghue, William E., stenographer	1,200.00
O'Reilly, Eugene W., stenographer	1,300.00
Reid, Mrs. D. B., stenographer	1,300.00
Robinson, Bertha H., stenographer	1,300.00
Murray, M. G., stenographer	1,200.00
Smith, John J., stenographer	1,200.00
Stubbs, E. L., stenographer	1,200.00
Van Deventer, Florence, stenographer	1,200.00
Wasserman, Henry, jr., stenographer	1,300.00
Weher, A. T., stenographer	1,200.00
Widmayer, Lawrence A., stenographer	1,300.00
Bray, Anna R., stenographer	1,200.00
Craig, Douglas, stenographer	1,200.00
Fowler, J. B., stenographer	1,100.00
Laas, Bolina, stenographer	1,100.00
Semsker, Jacob W., stenographer	1,100.00
Adams, Margaret, stenographer	1,000.00
Anderson, Amanda, stenographer	1,100.00
Bowling, R. W., typist	1,100.00
Goux, Edward, stenographer	1,000.00
Hawkins, Margory B., stenographer	1,000.00
Haydon, John N., typist	1,000.00
King, Arthur T., stenographer	1,000.00
Luber, Clara, stenographer	1,100.00
Lundgren, E. A., stenographer	1,000.00
Newhall, J. B., stenographer	1,100.00

Stenographic department—continued:	
Peacock, Katherine, typist	$1,100.00
Phelps, Maggie L., stenographer	1,000.00
Secrist, Carolyn E., stenographer	1,000.00
Snyder, Esther R., stenographer	1,000.00
Snyder, Mary, stenographer	1,000.00
West, Mary B. S., stenographer	1,000.00
Boyd, R. L., typist	900.00
Crutcher, Lulie Mae, typist	900.00
Cutler, William E., typist	900.00
Flynn, Helen A., typist	1,000.00
Moore, Maude T., stenographer	1,000.00
Van Dyke, Susan N., stenographer	1,000.00
Venable, Lizzie, stenographer	900.00
Voskuil, Walter H., typist	900.00
Wolfe, Bertha E., typist	1,000.00
Corbey, M. Louise, typist	1,000.00
Lavender, Tom, typist	840.00
Rohrich, N. E., typist	840.00
Skillin, A. B., typist	840.00
Stewart, J. F., typist	720.00
Woskoff, Sheba, typist	840.00
Berman, Sadie M., stenographer	780.00
Beale, Grace E., typist	780.00
Leland, Carmelita, typist	780.00
Lowd, Irence C., typist	780.00
Baker, Howell F., clerk	600.00
Caylor, Edith E., typist	720.00
Murray, Wm. F., clerk	720.00
Whitehead, Marvin L., typist	720.00
Personnel department:	
Eckert, Elizabeth K., head	2,000.00
Richardson, Helen R., stenographer	1,300.00
Dyer, Marguerite, clerk	1,300.00
MacWhorter, Ida E., clerk	1,000.00
Moulton, Mary L., clerk	1,100.00
Ross, Leona B., clerk	1,000.00
Sherman, Dorothy, clerk	1,100.00
Little, Mary E., clerk	900.00
Scott, May E., clerk	1,000.00
Brown, Eloise McK., clerk	720.00
Clark, Alice E., clerk	1,000.00
Smith, Mary K., clerk	900.00
Statistical department:	
Spaulding, J. Eliot, head	1,800.00
Craig, V. H., assistant	1,600.00
Lodge, Frank J., clerk	1,500.00
Yates, John A., clerk	1,500.00
Clagett, Jos. D., clerk	1,200.00
Dilli, Fred G., clerk	1,200.00
Harlow, W. F., clerk	1,200.00
Wilder, Morris M., clerk	1,200.00
Young, Jas. R., clerk	1,200.00
Fielding, Fred H., clerk	1,000.00
Mahoney, John A., clerk	1,000.00
Miller, Paul L., typist	1,000.00
Crump, T. Carlisle, clerk	960.00
Grant, P. A., draftsman on charts	1,500.00
Office equipment, printing, and supplies:	
Holmes, Chas. E., head	3,000.00
Reid, Albert, assistant	1.500.00
Callahan, R. B., clerk	1,200.00
Throckmorton, H. U., clerk	900.00
Oftenstein, Jos. M., clerk	900.00
Morrisey, J. L., messenger	720.00
White, Edgar E., messenger	720.00
Coates, Edgar, laborer	600.00
Coates, W., laborer	720.00

Mail department:	
Renaud, A. L., head	$1,800.00
Hunt, Ralph W., clerk	1,200.00
McNamara, T. A., clerk	1,200.00
Bentley, Richard Thomas, clerk	1,000.00
Grigsby, David G., clerk	1,000.00
Daly, Joseph J., clerk	900.00
Gould, Charles W., clerk	900.00
Parker, Joseph M., clerk	900.00
Poore, J. Raymond, clerk	900.00
Chase, William D., clerk	720.00
Davis, J. Ralph, clerk	720.00
Dillon, Edward T., clerk	840.00
Coakley, C. L., clerk	600.00
Messenger department:	
Holmes, Charles E.,[1] head	3,000.00
Farnum, Hamilton H., reception clerk	1,000.00
Kane, John M., head messenger	1,000.00
Austin, Val. G., messenger	600.00
Burnside, Bradford, messenger	720.00
Durham, Thomas S., messenger	720.00
Gravener, A. T., messenger	720.00
Koenig, W. V., messenger	840.00
Brown, F. Charles, messenger	600.00
Burrows, F. H., messenger	600.00
Chapman, D. S., messenger	600.00
Collins, Roy, messenger	600.00
Daily, Raymond F., messenger	600.00
Dameron, Paul Edward, messenger	600.00
Decker, Eugene, messenger	600.00
Disney, E. W., messenger	600.00
Donovan, Joseph A., messenger	600.00
Effer, Joseph Edward, messenger	600.00
Federline, E. E., messenger	600.00
Fetterman, O. B., messenger	600.00
Gardiner, George D., messenger	600.00
Grant, Robert F., messenger	720.00
Graves, Charles F., messenger	600.00
Grillo, Jerome J., messenger	600.00
Hall, Joseph L., messenger	600.00
Hardie, P. E., messenger	600.00
Hoeke, William L., messenger	600.00
Jacobs, J. Conrad, messenger	600.00
Jeffrees, William B., messenger	600.00
Jelifer, Tony, messenger	600.00
Kalstrom, C. Walter, messenger	600.00
Knott, Harry R., messenger	600.00
Leckey, Harry G., messenger	600.00
Le Mat, Raoul, messenger	600.00
Lewis, Raymond J., messenger	600.00
Lynn, W. P., messenger	720.00
McMahon, William L., messenger	600.00
Maxwell, C. D. G., messenger	600.00
Minick, Charles F., messenger	600.00
Noone, Thomas A., messenger	600.00
O'Lone, Joseph C., jr., messenger	600.00
Parker, Ralph E., messenger	600.00
Pierson, S. B., messenger	600.00
Schwartz, M. Charles, messenger	600.00
Sullivan, Joseph A., messenger	600.00
Thompson, George S, messenger	600.00
Tucker, Charles P., messenger	600.00
Turnley, Luther B., messenger	600.00
Uhthoff, Edwin, messenger	600.00
Weston, Lee T., messenger	600.00
Whittington, W. P., messenger	600.00
Young, Samuel R., messenger	600.00

Provision and maintenance of office building:	
Cunningham, G. D., head	$1,200.00
Robertson, James P., electrician	1,800.00
Urban, Oscar W., assistant to electrician	1,040.00
Cooper, Mrs. R. W., telephone operator	924.00
Frizelle, Marian, telephone operator	924.00
Fry, Mrs. H. H., telephone operator	924.00
Carter, E., watchman	660.00
Cook, Harry O., watchman	720.00
Wentworth, Crowley, watchman	720.00
Beckwith, B. T., janitor	600.00
Braxton, Basil, janitor	600.00
Cooper, Oliver, janitor	600.00
Duckett, Edward, janitor	600.00
Eskridge, D. W., janitor	600.00
Greene, G., janitor	600.00
Jackson, J., janitor	600.00
Pelham, John, janitor	600.00
Watson, L., janitor	600.00
Young, Charles, janitor	600.00
Guernsey, Frances, matron	480.00
Wheeler, E., matron	540.00
Blundell, L., charwoman	300.00
Flint, Mary, charwoman	300.00
Edwards, M., charwoman	300.00
Grimes, Nannie, charwoman	300.00
Harry, Bertha, charwoman	300.00
Hitner, Lizzie, charwoman	300.00
Hobbs, M., charwoman	300.00
Kappel, Mary, charwoman	300.00
Russel, L., charwoman	300.00
Sangston, L., charwoman	300.00
Simmons, S., charwoman	300.00
Wright, Elizabeth N., charwoman	300.00
Department of library and maps:	
Kidder, Harry W., head	1,600.00
Kimmel, Clarence, clerk	1,400.00
Clark, Charles F., clerk	900.00
Elliott, H. H., jr., clerk	1,200.00
Leetch, Louise C., clerk	1,020.00
Moore, Charlotte, assistant librarian	900.00
Potter, Edgar P., typist	1,200.00
Wilson, Ellen H., clerk	900.00
Detailed to Shipping Board:	
Flannery, J. Rogers, housing expert	6,000.00
Hepburn, Elsie V., stenographer	1,200.00
Snead, Alda, stenographer	1,200.00

DIVISION OF WOOD-SHIP CONSTRUCTION.

Heyworth, James O., manager	7,500.00
Philleps, Forrest P., private secretary	1,800.00
Saye, H. A., chief clerk	1,600.00

DIVISION OF STEEL-SHIP CONSTRUCTION.

Bowles, Francis T., manager	6,000.00
Stevens, Col. Edwin A., assistant to manager	2,500.00
Cox, Lieut. Daniel H., field officer	7,500.00
Mangum, James E., private secretary	1,800.00
Mercer, Whitfield L., chief clerk	2,400.00
Almony, J. W., stenographer	1,600.00
Reilly, Thomas, traveling inspector	2,400.00
Higgins, H. C., field officer	7,500.00
Cunningham, W. P., assistant to field officer	8,600.00

Technical department:

Ferris, Theodore E., naval architect	$30,000.00
Lovell, Ralph L., chief engineer	9,000.00
Harrison, James R., assistant to naval architect	6,500.00
Robertson, A. J. C., assistant to naval architect	4,800.00
Thayer, H. H., jr., assistant to naval architect	5,000.00
Conti, Angelo, marine engineer	5,000.00
Burlingham, William, assistant marine engineer	4,500.00
Miller, C. H., chief clerk	3,120.00
Wilson, Hugh, assistant calculator	3,420.00
Dean, E. D., clerk	1,440.00
Molster, Ralph R., confidential clerk	1,800.00
Ruppert, George H., clerk	720.00
Barrett, Charles G., engineering assistant	3,300.00
Gentles, Frank, engineering assistant	3,300.00
Iskols, Anatol D., engineering assistant	3,600.00
Spedden, Alexander W., technical assistant	2,400.00
Alsop, Edwin H., draftsman	1,560.00
Baldwin, E. T., draftsman	1,104.00
Billings, Harold W., hull draftsman	2,220.00
Brousseau, Edwin E., draftsman	1,600.00
Brown, Philip W., draftsman	2,280.00
Cook, Barton B., draftsman	3,666.00
Corbet, Alexander W., calculating draftsman	2,952.00
Davis, Horace A., draftsman	1,920.00
Dean, F. W., draftsman	3,000.00
Dickins, F. A., draftsman	2,040.00
Dippel, Philip B., draftsman	2,520.00
Emery, Waldo M., draftsman	2,760.00
Franks, Norvin, draftsman	1,440.00
Gillet, Charles D., draftsman	2,640.00
Gray, Lee Roy, draftsman	2,040.00
Goodwin, A. S., hull draftsman	2,016.00
Haag, Alfred H., chief hull draftsman	5,592.00
Helmer, Robert, hull draftsman	1,820.00
Hile, Harvey H., draftsman	2,952.00
Howcroft, W. H., draftsman	1,920.00
Husted, Harry M., draftsman	3,300.00
Kerlin, J. H., draftsman	2,280.00
Lee, T. S., draftsman	2,400.00
Lewis, Frank M., draftsman	1,488.00
Main, William B., hull draftsman	2,952.00
Michaels, Charles, draftsman	2,880.00
Murray, Charles E., draftsman	3,666.00
Pyne, Edward C., draftsman	1,800.00
Rhodes, Thomas A., draftsman	1,920.00
Rogers, James E., hull draftsman	2,185.00
Sheffield, Mason H., draftsman	2,952.00
Schoenmaker, Adrian, draftsman	1,920.00
Shiffli, H. J., draftsman	1,800.00
Sinclair, Louis B., draftsman	2,880.00
Strauss, Robert L., draftsman	2,400.00
Swann, Sydney C., draftsman	2,016.00
Taylor, John B., draftsman	3,300.00
Thomas, Arthur P., assistant draftsman	1,404.00
Thomas, George S., hull draftsman and estimator	2,832.00
Verhey, Hubert, chief draftsman	3,900.00
Verschoor, J., draftsman	2,100.00
Visintini, Marcel, draftsman	3,000.00
Voyce, Lee C., draftsman	1,800.00
Wickes, John C., draftsman	1,200.00
Wickes, William J., jr., draftsman	1,200.00
Williams, Clinton R., engineering draftsman	2,160.00
Yamin, Joseph, hull draftsman	2,124.00
Zipprodt, R. R., inspector	1,600.00

General commandeering:	
Prior, Laurens N., head	$6,000.00
Cook, George C., technical aid	3,500.00
De Leon, L. H., technical aid	3,000.00
Munroe, Joseph M., clerk	1,500.00
Bonsall, C. H., clerk	2,300.00
Brown, Thos. R., clerk	1,800.00
Dillon, Elizabeth M., clerk	1,000.00
Fowler, Sinclair B., clerk	1,000.00
Giovannetti, Carl A., clerk	600.00
Goldsmith, Myron B., clerk	1,100.00
Howard, Henry C., clerk	900.00
Hunt, Harry G., clerk	780.00
Lamore, Burton H., clerk	1,700.00
Noyes, Arthur R., clerk	1,000.00
Martin, Alice, draftswoman	900.00
Olds, Marian, draftswoman	600.00
Cummings, Lee H., hull draftsman	2,000.00
Elliott, J. Lloyd, draftsman	1,380.00
Gaines, Howard, draftsman	1,200.00
Haley, Arthur B., hull draftsman	2,080.00
Hummer, J. Earl, junior draftsman	900.00
Maynard, George E., draftsman	2,100.00
Williams, Robert W., draftsman	1,300.00
Worden, Frank B., draftsman	1,600.00
Department of inspection and production:	
McAuliffe, Pierce J., head	4,000,00
Barber, J. Fred, draftsman	2,400.00
Jackson, William H., draftsman	1,500.00
Preston, James, statistical clerk	1,500.00
Durfee, Elbert F., cost engineer	1,500.00
Bowen, Gerald A., clerk	1,500.00
Flaherty, William E., clerk	720.00
Flynn, James A., clerk	720.00
Groverman, W. E., clerk	720.00
Haynie, Fred H., clerk	1,200.00
Herbert, Amos E., clerk	1,200.00
Morris, Joel N., clerk	1,200.00
Muhlhofer, Charlotte G., clerk	900.00
Shea, Thomas F., clerk	1,300.00
Industrial service department:	
Bloomfield, Meyer, head	5,000.00
MacNary, E. E., expert assistant	4,000.00
Little, Amos R., exemption expert	3,500.00
Muhlhouser, Frank, special representative	3,500.00
Neary, James E., expert in charge vocational service	3,500.00
Burridge, George A., instructor	2,600.00
Casey, John P., instructor	3,120.00
Dougan, James E., instructor	5,512.00
Evans, Owen D., instructor	4,758.00
Jones, Harry L., instructor	4,030.00
Longfield, Ellsworth M., instructor	4,284.00
McKinney, James, instructor	2,600.00
Parsil, C. B., instructor	3,900.00
Wing, Francis H., instructor	3,952.00
Allen, Charles R., industrial training expert	4,000.00
Doten, Carroll W., assistant in industrial training	4,000.00
Fish, Elmer H., assistant in industrial training	4,000.00
Waugh, H. C., assistant in industrial training	3,000.00
Hoopingarner, D. L., assistant in industrial training	3,500.00
Belches, Richard E., clerk	1,200.00
Diecks, Verna M., clerk	1,560.00
Scott, Luther V., clerk	1,500.00
Willingham, C. H., clerk	1,300.00
Davis, Joshua, janitor	780.00
Sharmat, H. L., clerk	1,200.00

DIVISION OF SHIPYARD PLANTS.

Rousseau, Admiral H. H.,[1] head	Detailed.
Bing, Alexander M., secretary and field officer	$1.00
MacNelle, Perry R., consulting architect (per day for actual time)	25.00
Jones, J. Warren, assistant to manager	2,700.00
Fishach, L. G., computer and estimator	2,400.00
Bakenhus, Reuben E., civil engineer	Detailed.
Berg, Peter, office engineer	3,000.00
Bissell, C. T., advisory engineer on fire protection	1.00
Creuzbaur, R. W., engineer	4,000.00
Swasey, W. Albert, supervising engineer	3,000.00
Miller, Harold B., assistant engineer	2,000.00
Dennett, Robert C., fire protection engineer	1.00
Underwood, Francis T., chief clerk	2,000.00
Barton, J. Bryon, assistant chief clerk	1,600.00
Cassey, A. E., draftsman	1,600.00
Whittier, P. F., draftsman	1,200.00
Lavender, W. Robert, typist	840.00
Slattery, James J., clerk	1,200.00
Doorley, W. J., stenographer	1,200.00
Boyle, James F., stenographer	1,200.00
Newell, Karl G., stenographer	1,200.00
Reilly, Louise C., stenographer	1,300.00

DIVISION OF CONTRACTS.

Radford, George S.,[1] manager	7,500.00
Underwood, J. Y., assistant to manager	3.600.00
Rogers, Elmer E., secretary of contracts	1,500.00
Landis, Samuel B., research clerk	1,500.00
Woskoff, Michael, corresponding secretary	1,600.00

LEGAL DIVISION.

Payne, John Barton,[1] general counsel	7,500.00
Block, Herman, assistant counsel	2,500.00
Cuthell, Chester W., assistant counsel	4,000.00
Stern, C. S., assistant counsel	4,000.00
Weadock, Paul, assistant counsel	3,000.00
Wehle, Louis B., assistant counsel	4,000.00
White, William H., jr., assistant counsel	4,000.00
Pellett, M. E., secretary to general counsel	1,500.00
Lansdale, Arthur L., chief clerk	2,400.00
Walton, C. M., jr., law clerk	2,500.00
Dogett, Allen T., file clerk	1,500.00
Lamb, Joseph E., stenographer	1,200.00
Nichols, A. P., clerk	1,000.00
Williams, Herbert T., clerk	900.00

AUDITING DIVISION.

Bender, D. H.,[1] general auditor	6,000.00
Eastman, H. W., auditor	3,600.00
Wilson, Gordon, assistant general auditor	5,000.00
Luckett, Harry M., disbursing officer	3,000.00
Richon, J. L., chief clerk	3,600.00
Hayes, Gilbert, charge of insurance	7,500.00
Cadmus, George W., traveling auditor	4,000.00
Case, George W., traveling auditor	4,500.00
Richardson, John Y., traveling auditor	3,600.00
Wilson, Lee R., accountant	3,000.00
Williams, L. B., assistant auditor	2,400.00
Schaeffner, Chris. P., general bookkeeper	3,000.00
Bennett, Stephen H., bookkeeper	1,800.00
Harrison, Daniel J., bookkeeper	1,800.00
Wickliffe, Norman B., bookkeeper	1,680.00

Clement, H. H., clerk	$1,500.00
Culver, M. S., computing operator	1,100.00
Desautels, Leo J., secretary	1,800.00
Dillon, Maude, clerk	1,200.00
Ford, Charles K., stenographer	1,500.00
Gibb, Elizabeth H., stenographer	900.00
Giller, William D., clerk	1,200.00
Gurley, L. M., clerk	1,200.00
Hainsworth, Edith O., stenographer	900.00
Kellogg, Irwin S., clerk	1,380.00
Lineback, William J., clerk	720.00
Moreton, Herbert C., clerk	1,200.00
Quesenberry, William O., clerk	1,380.00
Wiemer, Otto, clerk	1,500.00

DIVISION OF TRANSPORTATION.

Joubert, F. C.,[1] manager	8,600.00
Hanson, George E., chief clerk	2,700.00
Floyd, Murray M., special representative	1,800.00
Nicolson, R. L., chief of division of car movements	1,800.00
Allen, George W., stenographer	1,500.00
Berden, Wendell P., stenographer	1,080.00
Cannon, William M., stenographer	1,200.00
Connolly, Joseph W., stenographer	1,200.00
McVeigh, Ruth M., typist	1,080.00
Martin, Charles R., jr., stenographer	1,500.00
Moore, Morgan, stenographer	1,320.00
Peckman, W. B., stenographer	1,200.00
Allison, Edna, billing clerk	1,080.00
Barron, T. L., file clerk	1,080.00
Bidmead, Frank K., rate clerk	1,320.00
Clapp, Almon M., tracing clerk	1,200.00
Cohan, George C., clerk	1,500.00
Dunigan, Ray I., file clerk	1,200.00
Greenlee, R. C., stenographer	1,200.00
Harrison, Henry E., clerk	900.00
Keane, E. A., stenographer	1,200.00
Kulle, Theodore, clerk	720.00
Lawrenson, Charles S., file and tracing clerk	1,020.00
Middleton, Frank E., jr., clerk	1,200.00
Naughton, Edw. T., rate clerk	1,500.00
Rice, Raymond, messenger	480.00
Robinson, W. S., rate clerk	1,680.00
Smith, Will C., clerk	2,100.00
Walker, Richard J., rate clerk	1,620.00
De Pilla, Barnard, messenger	420.00

PURCHASING DIVISION.

Browne, Frank A., general purchasing officer	7,200.00
Bell, A. L., assistant general purchasing officer	4,800.00
Bourke, John J., assistant purchasing officer	4,000.00
McCann, William R., assistant purchasing officer	4,800.00
Hunter, Oscar H., secretary	1,000.00
Birnie, Joseph, chief clerk	3,000.00
Adams, Thomas D., purchasing assistant	3,000.00
Carver, Louis W., purchasing assistant	2,400.00
Jasper, Grover R., purchasing assistant	2,700.00
Maple, O. S., purchasing assistant	3,000.00
Eccleston, John B., special lumber agent	3,000.00
Merrill, P. S., lumber assistant	3,600.00
Rebbeke, E. A., supervising inspector	3,000.00
Ahern, W. J., inspector	1,500.00
Autell, B. W., inspector	1,800.00
Baker, Earl E., inspector	2,400.00

Barnes, L. A., inspector	$1,800.00
Callan, John J., inspector	1,800.00
Campion, John H., inspector	2,100.00
Carney, W. F., inspector	2,100.00
Carty, Roy F., inspector	1,800.00
Chandler, C. E., inspector	2,100.00
Clark, H. H., inspector	1,800.00
Charlton, H. M., lumber inspector	1,800.00
Clemmer, D. P., inspector	1,800.00
Cruickshank, Alexander, inspector	1,800.00
Danahey, James T., inspector	1,800.00
Dehn, George R., inspector	1,800.00
Doyle, Robert M., inspector	1,800.00
Dyer, William C., inspector	1,800.00
Fairbanks, G. B., inspector	2,100.00
Farmer, William A., inspector	2,100.00
Fawcett, James K., inspector	3,600.00
Fellows, Frank E., inspector	1,800.00
Friend, Thomas H. H., inspector	1,800.00
Gilhams, H. S., jr., inspector	2,100.00
Grainger, Charles W., inspector	2,100.00
Harding, P. T., inspector	1,800.00
Harper, Robert M., inspector	2,100.00
Heckman, John C., inspector	1,800.00
Hennessy, W. J., inspector	2,100.00
Horne, Robert A., inspector	2,100.00
Houser, William M., inspector	2,100.00
Ivison, William S., inspector	1,800.00
Jameson, Thispis A., inspector	1,800.00
Johnson, R. S., inspector	1,800.00
Kilgour, O. C., inspector	2,100.00
Kleene, Walter P., inspector	1,800.00
Lenhy, Francis W., inspector	2,100.00
Lynes, H. E., inspector	2,100.00
McCool, O. N., inspector	1,800.00
McLaughlin, George G., inspector	1,800.00
Mack, S. S., inspector	1,800.00
MacNabb, Arthur W., inspector	1,800.00
Marks, Allen W., inspector	2,100.00
Marshall, W. L., inspector	1,800.00
Mohler, R. C., inspector	1,800.00
Morrow, H. B., inspector	1,800.00
Morton, Stanley L., inspector	2,100.00
Mulhearn, John, inspector	1,500.00
Newberry, F. E., inspector	2,100.00
Paxton, F. K., inspector	3,600.00
Proctor, A. W., inspector	1,800.00
Rogers, William E., inspector	2,100.00
Runyan, E. Burdette, inspector	1,800.00
Safka, Alfred, inspector	1,800.00
Saunders, J. P., inspector	1,800.00
Scott, Dudley H., inspector	1,800.00
Sjoblom, A. T., inspector	1,800.00
Tarshes, David, inspector	2,000.00
Teetes, George C., lumber inspector	1,800.00
Thayer, J. Clifford, inspector	2,100.00
Thayer, R. Lester, inspector	1,800.00
Vitoske, S. J., inspector	1,500.00
Waldron, William, inspector	1,800.00
Walsh, Frank J., inspector	1,800.00
Derham, Joseph J., jr., assistant inspector	1,200.00
Malcomson, Alfred S., assistant, lumber department	2,100.00
Abbott, Claude A., clerk	1,000.00
Bilson, Samuel W., clerk	900.00
Bosse, H. Theo., clerk	1,950.00
Brawner, Henry A., cost clerk	1,100.00
Brown, Hazel M., stenographer	1,200.00

Carlin, James F., clerk	$1,500.00
Dowd, William J., clerk	900.00
Fenton, H. B., material clerk	1,800.00
Flynn, George E., clerk	1,000.00
Gaines, Lloyd F., clerk	1,800.00
Goodwin, Harry A. B., clerk	1,000.00
Guiney, Ralph G., clerk	900.00
Harrington, W. J., clerk	1,800.00
Havener, W. J., clerk	720.00
Healy, Joseph L., clerk	1,000.00
Hobbs, L. N., lumber clerk and stenographer	1,500.00
Holland, Otho H. W., clerk	1,000.00
Jefferis, Paul M., order clerk	1,800.00
Jones, Albert S., statistician	1,500.00
Joseph, Hill L., clerk	1,200.00
Kane, William C., clerk	1,000.00
Kissinger, Evelyn, stenographer	1,000.00
Kolb, George T., clerk	1,200.00
Lewis, Harold L., correspondent	1,800.00
Lozier, Kenneth D., clerk	1,200.00
Lucas, Leah R	900.00
Lukkason, Almer, clerk	1,400.00
Massey, Alexander, clerk	1,200.00
Meyer, F. J., clerk	1,000.00
Orrison, Samuel M., clerk	1,200.00
Perlman, Joseph, clerk	1,500.00
Plaskett, George F., clerk	1,800.00
Potts, F. J., clerk	1,800.00
Ray, Laura, typist	1,000.00
Rice, Henry N., lumber clerk	1,500.00
Selby, F. C., clerk	1,800.00
Struass, Charles L., clerk	900.00
Sutton, Edward, clerk	900.00
Truman, William E., clerk	1,500.00
Willson, F. D., clerk	1,800.00
Woodman, Mabel K., clerk	900.00
Sprague, L. Harry, storekeeper	1,800.00
Lumber department, New Orleans:	
Haynen, W. J., assistant purchasing officer	4,200.00
Foote, H. D., chief clerk	2,400.00
Wilkerson, W. A., chief clerk	1,500.00
Holek, Charles F., assistant chief clerk	2,100.00
Kenney, Leo E., disbursing officer	2,000.00
Wells, E. E., local auditor	4,000.00
Sigler, Gordon L., bookkeeper	1,500.00
Wiggins, T. T., bookkeeper	1,200.00
Wilson, George W., bookkeeper	1,500.00
Barrett, S. B., stenographer	1,020.00
Breen, William D., bookkeeper	1,500.00
Buckman, Rose, stenographer	720.00
Bule, Neva L., stenographer	900.00
Gilmore, A. A., chief lumber clerk	1,500.00
Gleaves, Harry B., stenographer	
Graham, Lillian, file clerk	480.00
Heizer, R. E., office assistant	1,800.00
Jaeger, Amalia, stenographer	1,020.00
Kansas, Babette, stenographer	
Le Beau Lawless, Irene, stenographer	1,020.00
Le Blanc, Eugene Joseph, clerk	960.00
McCarthy, Mollie C., stenographer	
Marsh, Robert, junior clerk	480.00
Meinscher, Fred, clerk	900.00
Meunier, Marcel J., clerk	480.00
Morrison, Ethel C., stenographer	720.00
Owen, E. W., clerk	1,800.00
Polders, W. H., comptometer operator	960.00
Shepard, Blossom, stenographer	900.00

Lumber department, New Orleans—Continued:

Russell, James J., clerk	$720.00
Spedden, T. R., clerk	1,200.00
Tresca, C. F., lumber clerk	1,200.00
Urquhart, Wilkins F., assistant purchasing lumber clerk	720.00
Swiber, Joseph Leo, messenger	
Oswald, Hattie, comptometer operator	900.00
Gardinier, C. F., chief lumber inspector	2,700.00
Welch, J. S., chief lumber inspector	1,920.00
Page, Alex McN., production officer	
Brown, R. L., traffic officer	2,400.00
Allen, Jesse, lumber inspector	1,620.00
Augur, A. E., lumber inspector	1,500.00
Ausley, Thomas E., lumber inspector	1,620.00
Behnken, E. E., lumber inspector	1,500.00
Berry, A. D., lumber inspector	1,500.00
Best, J. H., lumber inspector	1,200.00
Borum, D. L., lumber inspector	1,620.00
Brackin, R. C., lumber inspector	1,620.00
Brandt, W. C., lumber inspector	1,620.00
Brooken, J. W., lumber inspector	1,500.00
Brown, B. W., lumber inspector	1,500.00
Brown, H. G., lumber inspector	1,620.00
Brown, Nelson P., lumber inspector	1,800.00
Brown, R. J., lumber inspector	1,800.00
Bulls, James A., lumber inspector	1,620.00
Burdett, E. I., lumber inspector	1,500.00
Callaway, J. S., lumber inspector	1,500.00
Cannon, Harry L., lumber inspector	1,620.00
Carson, Paul, lumber inspector	1,500.00
Charpia, Joseph B., lumber inspector	1,500.00
Clark, J. A., lumber inspector	1,620.00
Clark, Marion, lumber inspector	1,620.00
Clark, Thomas B., lumber inspector	1,500.00
Cobb, R. E., lumber inspector	1,500.00
Collier, William H., lumber inspector	720.00
Comstock, Frank, timber inspector and exc. inspector	1,800.00
Conn, S. W., lumber inspector	
Cope, W. H., lumber inspector	1,200.00
Cranford, V. R., lumber inspector	
Cross, Samuel M., lumber inspector	1,500.00
Davis, H. H., lumber inspector	1,500.00
Delph, W. W., lumber inspector	1,500.00
Denny, L. R., lumber inspector	1,500.00
De Witt, S. B., lumber inspector	
Dodd, Chester H., lumber inspector	1,620.00
Dysart, E. G., lumber inspector	1,620.00
Eagan, Earl M., lumber inspector	1,620.00
Evans, Jas. B., lumber inspector	1,200.00
Everest, H. H., lumber inspector	1,620.00
Eure, N. F., lumber inspector	1,500.00
Fall, W. E., lumber inspector	1,620.00
Fleming, W. L., lumber inspector	1,500.00
Foley, J. M., lumber inspector	1,800.00
Ford, Andrew H., lumber inspector	1,620.00
Foster, L. L., lumber inspector	1,620.00
Futch, W. O., lumber inspector	1,800.00
Gaillard, P., lumber inspector	1,500.00
Garrison, H. D., lumber inspector	1,800.00
Garrison, John H., lumber inspector	1,800.00
Gartley, E. J., lumber inspector	1,200.00
Goff, E. L., lumber inspector	
Gouner, L. E., lumber inspector	1,800.00
Green, J. J., lumber inspector	1,800.00
Greenwood, V. M., lumber inspector	1,800.00
Griffith, Thos., lumber inspector	1,500.00
Grimaldi, J. A., lumber inspector	1,620.00

Lumber department, New Orleans—Continued:

Cross, John E., lumber inspector	$1,500.00
Hairston, J. W., lumber inspector	1,800.00
Hamrick, W. B., lumber inspector	1,800.00
Hancock, R. J., lumber inspector	1,500.00
Hart, Carter, lumber inspector	1,620.00
Hawkins, E. L., lumber inspector	1,500.00
Hawkins, G. L., jr., lumber inspector	1,800.00
Hayes, T. J., lumber inspector	1,800.00
Hemphill, W. H., lumber inspector	1,200.00
Henderson, F. P., lumber inspector	1,200.00
Hennessy, W. F., lumber inspector	1,500.00
Henry, George, lumber inspector	1,500.00
Herlong, C. W., lumber inspector	1,500.00
Hewlett, O. C., lumber inspector	1,500.00
Hirt, H. E., lumber inspector	1,500.00
Hodges, E. I., lumber inspector	1,200.00
Hodges, J. M., lumber inspector	1,500.00
Hopkins, R. B., lumber inspector	1,800.00
Hubbard, Geo. T., lumber inspector	1,620.00
Hudson, J. H., lumber inspector	1,200.00
Huestis, H. F., lumber inspector	1,620.00
Hullinger, C. L., lumber inspector	1,500.00
Jensen, N. C., lumber inspector	1,500.00
Johnson, Jas. E., lumber inspector	1,500.00
Jordan, Thos. N., lumber inspector	1,800.00
Kelley, W. W., lumber inspector	--------
Kelly, F. B., lumber inspector	1,800.00
King, Roy L., lumber inspector	1,500.00
Kirkland, S. H., lumber inspector	1,500.00
Kotz, A. A., lumber inspector	1,500.00
Lacy, Jos. L., lumber inspector	1,500.00
La Monte, A. D., lumber inspector	1,500.00
Lay, William P., lumber inspector	1,800.00
Leonard, Robert N., lumber inspector	1,800.00
Lewis, Jasper A., lumber inspector	1,500.00
Logan, W. L., lumber inspector	1,800.00
Luminais, Lilian, telephone operator	--------
McDonald, Robert, lumber inspector	1,800.00
Mansell, S. B., lumber inspector	1,500.00
Marshall, T. O., lumber inspector	1,500.00
Matheson, Donald, lumber inspector	1,200.00
Maxwell, William R., lumber inspector	1,620.00
May, H. R., lumber inspector	1,500.00
Miller, Max E., lumber inspector	1,800.00
Mize, J. R., lumber inspector	1,500.00
Moody, Winston B., lumber inspector	1,620.00
Morgan, J. A., lumber inspector	1,200.00
Moore, Charles C., lumber inspector	1,500.00
Murphy, Louis H., lumber inspector	1,500.00
Musgrave, E. Marvin, lumber inspector	1,500.00
Newman, Axel H., lumber inspector	1,620.00
Newman, E. M., lumber inspector	1,620.00
Noyes, C. A., lumber inspector	1,500.00
Noyes, George W., lumber inspector	1,620.00
O'Hara, Francis J., lumber inspector	1,560.00
Oman, M. M., lumber inspector	1,200.00
Ozmer, T. G., lumber inspector	1,500.00
Page, John R., lumber inspector	1,500.00
Pendola, Marcus G., lumber inspector	1,800.00
Pierce, L. N., chief lumber inspector	3,000.00
Porter, J. R., lumber inspector	1,500.00
Powell, O. B., lumber inspector	1,500.00
Pringle, J. L., lumber inspector	1,800.00
Reed, V. E., lumber inspector	1,500.00
Rhodes, C. Marion, clerk	1,500.00

Lumber department, New Orleans—Continued:	
Richardson, J. S., lumber inspector	$1,800.00
Richarm, John D., lumber inspector	1,500.00
Robinson, R. G., production officer	1,800.00
Sandoz, A. J., lumber inspector	1,800.00
Scott, David B., lumber inspector	1,500.00
Seale, L. P., lumber inspector	
Segars, Leo L., lumber inspector	1,200.00
Sims, Frank W., lumber inspector	1,200.00
Smith, Leland L., chief lumber inspection clerk	1,800.00
Snelling, L. I., timber inspector	1,620.00
Somerville, R. S., production manager	1,800.00
Tackaberry, J. M., timber inspector	1,820.00
Taylor, Charles W., jr., lumber inspector	1,200.00
Thompson, L. L., timber inspector	1,620.00
Towsend, S. L., lumber inspector	1,620.00
Trembly, F. H., lumber inspector	1,500.00
Tucker, G. M., lumber inspector	1,500.00
Walton, L. D., lumber inspector	1,800.00
Ward, C. F., lumber inspector	1,500.00
Ward, J. Q., lumber inspector	1,500.00
Weeks, Gay E., lumber inspector	1,500.00
Townsend, Jim G., lumber inspector	1,620.00
Whittaker, George, lumber inspector	1,800.00
Wiley, George M., lumber inspector	1,620.00
Wolff, George E., lumber inspector	1,500.00
Wood, Mitchell M., lumber inspector	1,620.00

COMMITTEES.

Ship protection general committee:	
Donald, Commissioner John A., chairman	$1.00
Donnelly, William T., member	1.00
Couden, Rear Admiral A. R., member	Detailed.
Chubb, Hendon, member	1.00
Chamberlain, Eugene T., member	1.00
Hunt, A. M., member	1.00
Rousseau, Rear Admiral H. H.,[1] member	Detailed.
Phelps, Dudley W., office assistant	1,200.00
Munson, F. C., member	1.00
Scott, Commander W. P., member	Detailed.
Uhler, George, member	1.00
McAllister, Capt. C. A., member	1.00
McBride, Naval Constructor L. B., member	Detailed.
DeRemer, J. Grant, technical assistant	3,600.00
Committee on standard ship construction:	
Taylor, Admiral D. W., U. S. N., chairman	1.00
Pratt, Capt. W. V., U. S. N., secretary	1.00
Ferguson, H. L., member	1.00
Franklin, P. A. S., member	1.00
Ferris, Theodore E.,[1] member	30,000.00
Shipbuilding labor adjustment board:	
Macy, V. E., chairman	1.00
Wehle, Louis B.,[1] member	4,000.00
Fleishhaker, Mortimer, San Francisco representative	1.00
Lauck, W. Jett, statistician	5,000.00
Seagar, Henry R., secretary to board	6,000.00
Advisory housing committee:	
Rousseau, Rear Admiral H. H.,[1] chairman	Detailed.
Bing, Alexander M.,[1] secretary	1.00
Bloomfield, Meyer,[1] member	5,000.00
MacNeille, Perry R., member	1.00
Nolen, John, member	1.00
Kohn, Robert D., member	1.00

[1] Should appear under "Division of labor."

SUBMARINE BOAT CORPORATION.

Duncan, Greer A., resident engineer	Detailed.
Hunter, John, representing Submarine Boat Corporation	$7,500.00
Shortway, Maurice D., chief clerk	2,250.00
Casey, John J., local auditor	3,600.00
Faile, Edw. H., plant engineer	3,000.00
Tonnelier, John E., office engineer	3,600.00
Shankey, Joseph I., foundation inspector	1,800.00
Pevear, Norman W., machinery inspector	2,750.00
Baker, Orin C., jr., clerk	1,500.00
Dodd, Frank N., clerk	1,500.00
Hebeler, Henry, jr., stenographer	1,200.00
Hughes, Joseph F., clerk	1,600.00
Kochenburger, Jack F., stenographer	1,400.00
Higgins, Grace D., comptometer operator	1,000.00

AMERICAN INTERNATIONAL SHIPBUILDING CORPORATION.

Ferguson, W. B., resident engineer	7,500.00
Reed, P. L., resident engineer	Detailed.
McQuillan, John, general inspector	2,800.00
Watts, Franklin D., general inspector	2,800.00
Dickerson, H. L., local auditor	4,000.00
Alexander, A. P., assistant to local auditor	2,000.00
Rollinson, Ernest, assistant to local auditor	3,300.00
Rollason, G. H. S., office assistant	3,000.00
McClain, Benjamin A., assistant ways and equipment	2,400.00
John, Lieut. Edgar William, technical assistant	3,500.00
Towle, John W., plant engineer	3,000.00
Huxhold, C. H., traffic commissioner and equipment assistant	2,400.00
Latenser, John, jr., building assistant to plant engineer	2,400.00
Evans, Hywel, machinery inspector	
Hansen, Olaf, machinery inspector	2,250.00
Bucholz, F. H., chief clerk	1,200.00
Barcume, Hazel, stenographer	1,000.00
Baxter, Mary, stenographer	840.00
Bond, Beatrice M., file clerk and stenographer	780.00
Boswell, C. L., clerk	1,200.00
Cobb, H. Elmore, timekeeper, checker, and progress engineer	
Eaves, Edw. W., clerk	1,200.00
Getty, William, stenographer	1,040.00
Rosholm, M. A., stenographer and secretary	936.00
Schumann, Anthony, jr., clerk	1,200.00
Schwartz, Ray R., clerk	1,500.00
Rich, Verna, comptometer operator	900.00
Behan, Daniel, messenger	500.00

MERCHANTS SHIPBUILDING CORPORATION.

Frick, Henry E., resident engineer	6,000.00
Smith, Wilson F., resident engineer	5,400.00
Faus, H. W., office engineer	3,000.00
Killin, Edward C., senior hull inspector	2,618.88
Greenberg, Joseph J., valuation expert	1,000.00
Albree, Edward C., auditor	4,200.00
Seifert, Alfred C., local auditor	2,000.00
Dudley, A. C., clerk	2,000.00
Kline, Robert E., plant engineer	3,600.00
Bayliss, Harold H., assistant to plant engineer	
Henkels, Thomas H., assistant plant engineer	1,800.00
Leonard, William J., assistant plant engineer	1,800.00
Smither, P. P., senior engine inspector	3,000.00
Cremins, Timothy M., chief clerk	1,500.00
Long, Charles T., inspector of machinery	2,500.00
Moxley, George F., assistant inspector	2,400.00
Franklin, George F., chief clerk	1,800.00

Brister, Marion C., stenographer	$900.00
Gruber, Anna, stenographer	840.00
McIlvaine, Regina I., stenographer	780.00
Smith, Helen S., stenographer	840.00
Wenick, Herman, stenographer	1,300.00
Aschman, F. T., jr., clerk	2,000.00
Cooper, Charles J., clerk in charge	1,800.00
Crosman, Charles H., clerk in charge	1,800.00
Dean, James E., clerk	1,700.00
Ferry, Edward, clerk	1,500.00
Higgins, Thomas J., clerk	1,300.00
Kerr, D. F., clerk	1,500.00
Schwartz, Sue S., clerk	900.00
Wieners, Arthur F., clerk	1,200.00
Kennedy, Thomas F., office boy	360.00
Nichols, George K., senior engineer assistant	4,000.00
Thomson, James W., machinery inspector	2,500.00
Church, Herbert, assistant resident inspector	1,200.00

AMERICAN CHAIN CO.

Sparfield, E. H., resident engineer	1,800.00
Melenbacker, A. L., local auditor	2,600.00

BOSTON DISTRICT.

Trowbridge, Henry C., district officer	5,000.00
Bowditch, John P., assistant district officer	2,500.00
Miller, Hiram A., resident engineer	3,000.00
Fay, William Rodman, chief clerk	1.00
Brayley, Fred, jr., office boy and clerk	576.00
Carney, Evelyn M., stenographer	660.00
Devlin, Elizabeth G., stenographer	780.00
Donahue, Nellie L., stenographer	780.00
Fish, Albert L., timekeeper	780.00
Gately, Mary J., stenographer	780.00
Gorman, Lucie, Miss, stenographer	780.00
Hassett, Ursula M., stenographer	730.00
Hodgdon, Nellie L., stenographer	552.00
Hunter, Margaret E., stenographer	780.00
Lane, Carl W., stenographer	1,050.00
Lyons, Myra L., stenographer	1,200.00
Littlefield, Harold A., checker of labor and lumber	1,200.00
Nocholls, Marietta B., stenographer	780.00
O'Conner, Emeline, stenographer	720.00
Seeley, Grace M., stenographer	780.00
Strong, George J., district auditor	3,600.00
Brada, John E., resident auditor	2,400.00
Conway, James P., assistant resident auditor	1,200.00
Gregg, Clifton W., resident auditor	1,800.00
La Rocque, Alfred H., resident auditor	1,800.00
McManus, Frank J., resident auditor	1,300.00
Mayer, Philip J., resident auditor	1,800.00
Purinton, James C., resident auditor	1,800.00
McLoughlin, John P., head accountant and disbursing officer	2,000.00
Jones, Fred A., chief inspector	4,000.00
Arringdale, Jere F., inspector of steel hulls	3,000.00
Arringdale, Leroy O., inspector of steel hulls	2,500.00
Bernard, E. G., machinery inspector	2,700.00
Burwell, Elliott Noel, inspector of wood hulls	2,600.00
Butler, Henry W., inspector of wood hulls	2,400.00
Carey, John C., inspector of steel hulls	2,750.00
Cory, Andrew A., inspector of wood hulls	2,000.00
Gross, Walter A., inspector of wood hulls	2,200.00
Geist, Alfred W., jr., inspector of steel hulls	2,500.00
Gober, Fred G. L., machinery inspector	2,750.00
Green, Walter L., jr., inspector of steel hulls	2,500.00

Hawley, James W., inspector of wood hulls	$2,000.00
Lord, Charles E., machinery inspector	2,700.00
Marshall, Fred H., inspector of wood hulls	1,800.00
Miles, Christopher, inspector of steel hulls and ships	2,500.00
Patterson, Capt. B. O., inspector	2,500.00
Rowen, Joseph B., inspector of steel ships	3,000.00
Rowen, J. Warren, assistant inspector	1,600.00
Smith, Capt. Jesse, assistant inspector	2,200.00
Sullivan, George, inspector of steel hulls	2,700.00
Sullivan, Jerome L., inspector of steel hulls	2,750.00
Tumbridge, Judd, inspector of steel hulls and ships	1,200.00
Weber, Raymond C., inspector of steel ships	1,525.00

NEW YORK DISTRICT.

Bookwalter, Charles S., district officer	10,000.00
Bickman, Fred W., chief clerk	3,000.00
Lathrop, John M., stenographer and secretary	1,560.00
Bender, Marguerite E., stenographer and telephone operator	780.00
Brennan, George I., office boy	394.00
Goodnough, Rex E., chauffeur	1,300.00
Hagan, May A., stenographer	1,200.00
McGrath, Katherine C., file clerk and switchboard operator	780.00
McSorely, Gertrude, Miss, stenographer	1,200.00
Moore, Theodore C., clerk	1,200.00
Pribst, Alice B., stenographer	1,200.00
Seck, Florence V. M., stenographer	936.00
Mann, William J., district auditor	3,000.00
Webster, Stanley, disbursing officer	2,400.00
McCullough, John E., accountant	2,000.00
Martin, Peter P., accountant	1,400.00
Ackerman, Herold B., resident auditor	2,400.00
Cannon, James P., resident auditor	2,400.00
Browning, William H., jr., resident auditor	2,000.00
Davison, James M., assistant resident auditor	1,500.00
Dickerson, Sydney J., resident auditor	2,400.00
Eagan, Gerald A., assistant resident auditor	1,500.00
Hanf, Joseph B., resident auditor	2,000.00
Nagel, H. D., assistant resident auditor	1,500.00
Overend, John F., resident auditor	2,400.00
Sargent, Herbert J., resident auditor	1,800.00
Syer, Sidney J., resident auditor	2,800.00
Thayer, Nelson B., resident auditor	2,000.00
Vickers, Arthur E., resident auditor	2,400.00
Williams, Charles L., resident auditor	2,000.00
Wilkie, A. C., chief clerk	4,000.00
Abrams, James S., resident auditor	3,000.00
Ambrose, John F., resident auditor	2,400.00
Dalzell, R. S., resident auditor	3,600.00
Drum, Redmond J., resident auditor	3,000.00
Gardner, Blanchard, resident auditor	1,800.00
Gearsall, William D., resident auditor	2,400.00
Jewett, M. M., assistant resident inspector	2,400.00
Kirk, John P., resident inspector	3,000.00
Lewis, Capt. S. E., resident inspector	2,400.00
Low, David A., resident inspector	2,760.00
McKinney, James A., resident inspector	1,800.00
McLoughlin, William J., traveling lumber inspector	2,000.00
Mills, W. M., resident inspector	2,400.00
Paterson, George M., inspector	3,200.00
Postel, F. A., resident inspector	1,800.00
Sloat, Benjamin C., resident inspector	3,600.00
Solheim, Charles N., assistant resident inspector	1,800.00
Wahlquist, O., resident inspector	1,800.00
Wilmoth, W. F., resident engineer	
Winslow, John, resident engineer	3,000.00
Wood, Benjamin B., assistant resident inspector	1,800.00

BALTIMORE DISTRICT.

McDermott, G. R., district officer	$5,000.00
Albert, Calvin D., assistant district officer and chief inspector	3,000.00
Anderson, David G., resident engineer	3,000.00
Raine, Alfred M., resident auditor	2,400.00
Bayliss, George F., chief clerk	2,100.00
Anderson, M. Blanche, file clerk	720.00
Cox, Mary A., stenographer	1,000.00
Lambdin, Gladys A., messenger and telephone operator	650.00
Reilly, Rose E., stenographer	1,000.00
Rogers, Elsie, stenographer	1,200.00
Solomon, Florence, stenographer	1,000.00
Winaud, Ella A., stenographer	900.00
Wise, Lillian B., stenographer	1,000.00
Englis, Charles Mortimer, supervisor of construction	1.00
Becker, William D., assistant inspector	1,500.00
Belcher, Frank K., inspector	2,100.00
Burke, Michael J., inspector	1,980.00
Craig, James, inspector	2,400.00
Davie, J. A., assistant inspector	2,400.00
Davie, James K., inspector	2,400.00
Flannery, Michael F., inspector of boilers and machinery	2,400.00
Goetz, Thomas M., inspector	2,580.00
Jackson, Guy, jr., inspector	1,800.00
Kipper, Fred H., inspector	1,800.00
Lindal, Robert, inspector	2,310.00
Linthicum, Samuel E., resident inspector	2,100.00
Lynn, James J., ship inspector	2,100.00
McQueen, Robert, inspector	3,720.00
Marsh, J. Henry, inspector	2,100.00
Megee, George E., resident ship inspector	1,500.00
O'Keefe, J. C., assistant inspector	1,980.00
Pigford, Percy G., inspector of boilers and machines	2,400.00
Rittenhouse, Gerard H., refrigerating inspector	2,100.00
Ruark, Charles W., inspector	1,980.00
Sullivan, Michael J., inspector	1,800.00
Swadkins, William C., inspector	3,120.00
Verner, Arthur, inspector	2,760.00
Werner, George P., inspector	2,400.00
White, Edwin S., assistant inspector	1,380.00
Birdsall, Alvin C., district auditor	3,600.00
Campbell, Arthur, resident auditor	1,800.00
Culver, Francis B., auditor	2,400.00
Spotswood, William F., resident auditor	1,800.00
Giese, W. H., accountant	1,800.00
Horn, Francis, jr., accountant	1,600.00

JACKSONVILLE DISTRICT.

McGowan, W. C., district officer	5,000.00
Sharlow, E. K., assistant district officer	2,000.00
Dozier, Screven, disbursing officer	2,000.00
Blackwood, Paul, stenographer	1,200.00
Booth, Lee M., stenographer	1,080.00
Brown, Arthur E., voucher clerk	1,500.00
Calhoun, Nora Bessie, stenographer	900.00
Campbell, Eleanor, typist	720.00
Dalloz, Magdalen, stenographer	1,200.00
Greenwood, Robert R., office boy	360.00
Mendenhall, Grace E., clerk	600.00
Pratt, Ernestine, bookkeeper and typist	900.00
Smith, Le Grand, jr., stenographer and file clerk	1,200.00
Stewart, Lucy, stenographer	900.00
Telfair, W. H., stenographer	1,200.00
Theegarten, Florence, stenographer	1,200.00
Smith, Granville, chief inspector	2,500.00

Allen, H. C., lumber inspector	$1,500.00
Baker, H. W., lumber inspector	1,200.00
Bowler, W. R., resident inspector	2,000.00
Bryan, V. R., lumber inspector	1,500.00
Cowley, Richard V., resident inspector	2,400.00
Denver, F. T., lumber inspector	1,200.00
Dillard, J. R., resident inspector	2,400.00
Dougherty, B., resident inspector	2,000.00
Farris, Walter C., lumber inspector	1,500.00
Freeman, Robert Guy, lumber inspector	1,500.00
Gray, C. E., lumber inspector	1,500.00
Harden, Reid R., lumber inspector	1,500.00
Hunter, Albert S., lumber inspector	1,500.00
McCormick, John, lumber inspector	1,500.00
McDonagh, Martin P., resident inspector	2,400.00
McKenzie, James, resident inspector	1,500.00
McLeod, W. M., lumber inspector	1,500.00
Miller, L. J., lumber inspector	1,500.00
Rigdon, E. P., lumber inspector	1,200.00
Smith, L. P., lumber inspector	1,500.00
Smith, Maloon, lumber inspector	1,500.00
Smith, Patrick L., lumber inspector	1,500.00
Smith, S. P., lumber inspector	1,500.00
Smith, W. F., lumber inspector	1,500.00
Todd, James C., lumber inspector	1,200.00
Travis, J. Louis, lumber inspector	1,500.00
Webster, Charles L., lumber inspector	1,200.00
Weimar, H. T., lumber inspector	1,500.00
Hodges, Hayden, district auditor	3,600.00
Cowles, Frank L., chief accountant	2,000.00
Gilliland, Daniel B., jr., resident auditor	2,400.00
Dudley, Charles T., resident auditor	2,400.00
Holcombe, James G., resident auditor	2,000.00
Jackson, Edmund S., resident auditor	2,000.00

NEW OREANS DISTRICT.

Johnson, Warren, district officer	5,000.00
Legett, Albert J., jr., assistant district officer	1,800.00
Hunt, A. B., chief clerk	2,700.00
Arnoult, Helen C., stenographer	720.00
Garvey, Lillian S., stenographer	900.00
Richard, Marie J., stenographer	1,080.00
Thomas, May L., stenographer	900.00
Westervelt, Harvey H., district auditor	4,000.00
Bruno, Lucas, accountant	2,000.00
Nathern, L. P., resident auditor	1,800.00
Murphy, Edward, resident auditor	1,800.00
Bouden, Charles W., disbursing officer	2,400.00
Stout, Arthur W., chief hull inspector	2,400.00
Mohr, O. P., inspector	1,800.00
Swetman, J. M., lumber inspector	1,500.00
Walker, Ephraim B., lumber inspector	1,500.00
Allsin, George O., jr., resident lumber inspector	1,800.00
Blackwell, J. P., lumber inspector	1,800.00
Earles, J. S., lumber inspector	1,800.00
Feitel, Arthur H., lumber inspector	1,800.00
MacKenzie, Jordan, hull inspector	1,800.00
Manscoe, William J., lumber inspector	1,800.00
Pierpont, Robert A., resident hull inspector	1,800.00
Richardson, H. E., lumber inspector	1,800.00
Shepard, Martin, resident inspector	1,800.00
Soule, Robert S., hull inspector	1,800.00
Stouse, Louis E., hull inspector	1,800.00

HOUSTON DISTRICT.

Crowell, Charles N., district officer	$5,000.00
Martin, Edw. A., assistant district officer	3,000.00
Damico, William, messenger	240.00
Daniel, O. D., clerk	1,200.00
Estes, Ethel, stenographer	1,020.00
Hartzog, Buford, clerk	1,200.00
Layman, J. Harry, clerk	900.00
McLane, F. H., office assistant	1,200.00
Meredith, Mary C., secretary	1,080.00
Pace, O. E., file and correspondence clerk	1,500.00
Robinson, D. C., stenographer	1,020.00
McKeon, Winfield, district auditor	3,600.00
Hogan, M. J., chief clerk and disbursing officer	2,500.00
Ball, Joseph A., resident auditor	2,400.00
Boyser, A. H., jr., general bookkeeper	1,500.00
Greenberg, Isadore, chief accountant	1,900.00
Mears, Henry D., accountant	2,000.00
Thomas, J. B., resident auditor	2,000.00
Turner, Charles D., resident auditor	2,000.00
Roundy, Henry J., chief construction inspector	2,200.00
Brown, Leroy, construction inspector	1,800.00
Brooks, R. C., construction inspector	1,800.00
Clayton, R. G., construction inspector	1,800.00
Clift, John W., construction inspector	1,800.00
Collins, Joseph M., assistant construction inspector	1,500.00
Cooper, Allen, timber inspector	1,620.00
Drackett, John R., construction inspector	
Gilmore, E. E., timber inspector	1,620.00
Hamrick, George T., construction inspector	1,500.00
Murray, George, construction inspector	1,800.00
Norris, W. X., constructor inspector	1,500.00
Patterson, J. B., construction inspector	1,800.00
Richardson, Webster, construction inspector	1,800.00
Steagall, J. M., timber inspector	1,620.00
Street, Leroy R., assistant construction inspector	1,500.00
Thacker, Richard B., construction inspector	1,800.00
Ward, Charles A., timber inspector	1,600.00
Weaver, L. C., construction inspector	2,160.00
Kellersberger, Arnold G., draftsman	1,500.00

SAN FRANCISCO DISTRICT.

Pillsbury, A. F., district officer	10,000.00
Armes, George A., assistant district officer	8,500.00
Thacher, Thomas A., counsel	4,200.00
Allson, William H., engineer officer	5,000.00
Tiernan, Charles T., chief engineer	3,000.00
O'Connell, Lawrence, chief clerk	2,700.00
Chapman, R. J., draftsman	2,400.00
Brittain, Roberta G., stenographer	1,200.00
Buckingham, O., Mrs., file clerk	1,500.00
Harney, Mary L., stenographer	1,260.00
Harrold, Lena, stenographer	1,500.00
Nelson, Edward W., clerk and messenger	720.00
Patton, Lillian, exchange operator	900.00
Rogers, Carleton C., secretary to district officer	1,500.00
Tebbs, Marguerite, head stenographer	1,440.00
Boss, Joseph A., messenger and clerk	720.00
Dwiggins, Cora A., assistant file clerk	1,020.00
Usinger, Mabel, stenographer	1,020.00
Reed, George D., district auditor	3,600.00
Meherin, Charles J., disbursing officer	2,500.00
Burston, Phillip G., resident auditor	2,000.00
Cameron, Ewen, resident auditor	2,500.00
Field, M. D., resident auditor	2,500.00

Miller, James B., resident auditor	$2,000.00
Parker, H. M., resident auditor	2,100.00
Pool, Robert R., resident auditor	1,800.00
Arnold, James, accountant	2,400.00
Flynn, John F., accountant	2,000.00
Kibbe, George R., accountant	2,000.00
Walker, Hugh S., accountant	2,000.00
Wilson, Arthur, accountant	2,400.00
Anderson, Arthur G., inspector of hulls and machinery	3,600.00
Anderson, Just, inspector of hulls	2,400.00
Anderson, Walter B., inspector of hulls and machinery	2,400.00
Anderson, William, hull inspector	2,400.00
Cadman, Charles K., hull inspector	2,400.00
Chisholm, William, chief inspector of hulls and machinery	6,000.00
Crosby, William W., inspector of hulls	2,400.00
Cruger, James H., inspector of hulls	2,400.00
Dettmer, John R. F., inspector of hulls and machinery	2,100.00
Donald, William, hull inspector	3,000.00
Dickie, G. W., inspector of hulls and machinery	3,200.00
Richler, Alfred A., traveling inspector of hulls	3,600.00
Fitzgerald, John P., inspector of hulls	2,400.00
Flynn, Matthew, inspector of hulls and machinery	2,100.00
Grothman, Herman R., inspector of hulls and machinery	3,000.00
Haley, Harry S., inspector of machinery	3,000.00
Harden, Frank W., inspector of hulls	2,400.00
Hayes, Joel A., inspector of hulls and machinery	2,400.00
Jackson, Oliver M., inspector of hulls and machinery	2,400.00
Klitgaard, Carl E., inspector of hulls and machinery	2,640.00
Loyanhan, T. E., hull inspector	1,800.00
McCarthy, Eugene, inspector of hulls and machinery	2,100.00
McVeigh, John, inspector of hulls and machinery	2,100.00
Maxwell, G. R., inspector of hulls and machinery	2,400.00
Mengula, Lawrence J., inspector of hulls and machinery	2,400.00
Mecredy, W. J., inspector of hulls and machinery	2,400.00
Murray, Frank J., inspector of hulls and machinery	3,000.00
Nephum, H. M., assistant inspector	3,000.00
Schrock, W. G., inspector of hulls and machinery	2,400.00
Senter, G. H., inspector of hulls and machinery	3,000.00
Stewart, W. H., inspector	5,000.00
Symen, David A., hull inspector	2,400.00
Westlund, John, inspector of hulls and machinery	2,400.00
Hough, Edward S., consulting engineer	10,200.00

SEATTLE DISTRICT.

Blain, John F., district officer	8,500.00
Hamilton, C. H., assistant district officer	6,000.00
Woolley, A. F., resident engineer	3,600.00
Callis, D. Millard, technical assistant	4,500.00
Brandt, Harry, district officer	2,400.00
Cosgrove, Howard G., attorney	3,000.00
Thompson, W. H., stenographer	--------
Armstrong, Marie H., file clerk	1,200.00
Berry, Clarence F., clerk and stenographer	1,500.00
Brandt, Helen L., telephone operator	900.00
Caughey, Genevieve, stenographer	1,080.00
Davis, Percy W., file clerk	1,800.00
Dew, Harvey C., clerk	1,500.00
Dunn, Edith M., stenographer	1,200.00
Engelbecht, Josephine B., assistant file clerk	1,140.00
Flynn, Irma L., stenographer	1,200.00
Hanson, Marcus M., file clerk	1,800.00
Kneisly, Margaret S., stenographer	1,200.00
Lervold, Victor A., stenographer and clerk	1,500.00
Maahs, Lovina R., stenographer	900.00
Maxwell, Katherine T., telephone operator	900.00
MacDonald, Marion, stenographer	1,200.00

Ogden, John L., clerk and stenographer	$720.00
Pfeifer, Katherine, stenographer	1,200.00
Rochford, Hope E., stenographer	1,200.00
Romine, J. R., clerk	1,800.00
Spaulding, Helen E., stenographer	1,080.00
Thompson, W. H., stenographer and clerk	
Leavers, William W., draftsman	1,800.00
Geary, L. E., draftsman	3,000.00
Purse, John, district auditor	4,000.00
Fleming, S. P., traveling auditor	3,000.00
Keys, Cecil G., accountant	2,400.00
Deane, G. P., auditor	2,400.00
Adams, Howard O., assistant resident auditor	1,800.00
Hansen, Lorenzo, assistant auditor	1,800.00
Hoffman, Daniel, resident auditor	2,400.00
Hoskins, L. P., resident auditor	1,800.00
Looker, Edward, resident auditor	2,400.00
Smith, Harold N., auditor	1,800.00
Searle, G. P., auditor	1,680.00
Smith, Jerome, resident auditor	2,400.00
Magee, W. A., chief inspector	4,500.00
Auburn, N. C., inspector	2,400.00
Baggott, R. H., inspector	3,000.00
Brownlie, F. G., inspector	1.00
Bruns, Elwyn H., inspector	3,000.00
Bull, George S., inspector	2,400.00
Burness, Robert E., inspector	2,400.00
Cantine, E. F., inspector	2,400.00
Cave, Henry, inspector	3,280.00
Cleeve, Richard S., inspector	3,000.00
Cook, William, inspector	3,000.00
Cox, Walter, inspector	3,000.00
Craven, J. H., inspector	1.00
Earnshaw, George, inspector	3,000.00
Egbert, Edw., inspector	3,600.00
Ellis, R. H., inspector	2,700.00
Eyres, William I., inspector of construction	2,400.00
Fairbairn, C. J., inspector	1.00
Flett, J. C., inspector	2,400.00
Fotheringham, J., inspector	1.00
Fuller, A. E., inspector	2,400.00
Generaux, E. G., inspector	1.00
Ginagey, P. H., resident auditor	1,620.00
Greenfield, W. H., inspector	2,400.00
Hall, Joseph W., assistant inspector	3,000.00
Hanson, Harold C., inspector	2,400.00
Haskins, W. Z., inspector	3,000.00
Hastings, Loren B., inspector	2,400.00
Hawkins, Mortimer, inspector	3,000.00
Helmer, M. R., inspector	2,400.00
Higgings, Sydney M., inspector	2,400.00
Hindmarsh, Victor, inspector	2,400.00
Hofguard, G., inspector	1.00
Holmes, F. A., inspector of construction	2,400.00
Horn, J. G., assistant inspector	2,400.00
Hopps, George A., machinery inspector	3,300.00
Hyde, Alexander, inspector	2,400.00
Hubbard, John L., traveling inspector	3,600.00
Hussy, Gordon, inspector of machinery	3,000.00
Hutchings, D. B., inspector of construction	2,700.00
Jensen, J. A., inspector	2,400.00
Koster, George J., inspector	2,400.00
Kruse, Archie E., assistant inspector	2,400.00
Kruse, Fred D., inspector	2,400.00
Lattie, J. J., inspector of construction	2,400.00
Leary, Daniel O., assistant inspector of machinery	3,000.00
Ledbetter, W. L., inspector	3,000.00

Lovell, W. W., inspector	$3,000.00
McGregor, Alexander, inspector	2,400.00
Magee, Charles, inspector	2,400.00
Markey, Henry W., inspector	2,400.00
Mawson, George W., inspector	2,400.00
Morgan, George W., inspector	2,400.00
Moritz, Charles T., inspector	2,400.00
Murray, J. C., inspector	1.00
Murray, Robert D., inspector	2,400.00
Nelson, Leonard, inspector	3,000.00
Perow, W. G., inspector	3,360.00
Perry, Frank A., inspector	2,400.00
Piltz, John H., inspector of construction	2,400.00
Rahlves, Henry J., inspector	3,660.00
Randles, H. H., inspector of construction	2,400.00
Rice, Clay, inspector	2,400.00
Ridley, Robinson, inspector	3,000.00
Robinson, Richard C., inspector	3,000.00
Rochford, John C., inspector	3,000.00
Rusted, S., inspector of construction	3,000.00
Schneidewind, Frederick, inspector	2,400.00
Shaver, Joseph, inspector of construction	2,400.00
Sheerer, Harold M., inspector	3,000.00
Smart, William R., inspector	3,000.00
Stedman, John B., inspector	2,400.00
Stewart, A. G., machinery inspector	1.00
Stewart, Duncan, inspector	1.00
Stuart, Edward, inspector	2,400.00
Summers, Emil, inspector	2,484.00
Thomas, H. E., inspector	2,400.00
Varney, William H., inspector	3,000.00
Veysey, Capt. L., inspector	3,000.00
Walker, Frank, inspector	1.00
Weir, George, inspector	2,400.00
Willis, R. M., machinery inspector	2,400.00
Wentworth, L. J., inspector	----------

GREAT LAKES DISTRICT.

Penton, Henry, district officer	5,000.00
England, R. W., assistant district officer	3,600.00
Wright, William, assistant to district officer	4,200.00
Wilby, Carlton, special representative	3,600.00
Luthy, C. F., disbursing officer	2,400.00
Houston, Lester, district auditor	3,600.00
Harroun, Robert L., resident auditor	2,000.00
Hanna, S. C., resident auditor	--------
Kelly, Royal G., resident auditor	1,800.00
Lamberson, Raymond V., resident auditor	1,800.00
Levin, Alexander E., accountant	1,800.00
Thomas, J. E. W., resident auditor	2,000.00
Wolfe, Joseph W., resident auditor	1,800.00
Allen, J. M., resident inspector	2,400.00
Atherolt, William C., inspector of construction	2,700.00
Conwell, William C., inspector	2,400.00
Kidd, Robert H., inspector	1,500.00
Ridler, H. Empson, inspector	1.00
Van Keuren, Charles R., assistant inspector	--------
Ward, George B., chief inspector	3,600.00
Elben, Anna, stenographer	1,320.00
Frost, Leland V., clerk	1,200.00
Johnson, Sigred A., stenographer	1,080.00
Lacy, Thomas J., messenger	720.00
Taggart, Clementine, stenographer	960.00

PHILADALPHIA DISTRICT.

Grogan, F. W., district officer	$5,000.00
Fendall, Thomas M., resident engineer	2,400.00
Freeman, Arthur C., resident engineer	3,600.00
Fursteneau, Stanley B., draftsman	2,500.00
Franklin, George F., chief clerk	1,800.00
Herring, Douglas, disbursing officer	1,800.00
Hamell, Frank E. H., district auditor	3,600.00
Bonner, Frank L., resident auditor	2,000.00
Agnew, John C., assistant resident auditor	1,800.00
Brott, Edward C., assistant resident auditor	1,800.00
Chapin, H. M., accountant	2,800.00
Conway, Charles R., assistant resident auditor	1,800.00
Dancker, Charles C., resident auditor	2,000.00
Danish, S. M., assistant auditor	1,800.00
Delebar, H. C., assistant resident auditor	1,800.00
Genne, Charles G., resident auditor	2,000.00
Hayden, Harry H., resident auditor	2,400.00
Lester, Arthur G., resident auditor	2,400.00
McCormick, Richard A., resident auditor	1,800.00
Oppelt, Edward A., assistant inspector	2,100.00
Peynter, Alfred J., assistant resident auditor	1,560.00
Rhenberg, George A., resident auditor	2,200.00
Shields, Joseph J., assistant resident auditor	1,800.00
Valentine, Willard S., assistant resident auditor	1,800.00
Wellbrock, George W., assistant resident auditor	1,800.00
Boswell, C. L., clerk	1,200.00
Cooney, Emily, stenographer	900.00
Cramer, Ada V., stenographer and secretary	1,300.00
Cramer, Mildred, stenographer	960.00
Getty, William, stenographer	
Grogan, Earl S., office attendant	600.00
Norrism, Anna, stenographer	900.00
Ware, Della F., file clerk	600.00
Wentz, Robert D., office assistant	600.00
Boulden, Winfield, assistant inspector	1,800.00
Cattrall, J. F., inspector	2,400.00
Christie, David A., inspector	2,700.00
Coates, Spendley, inspector	3,570.00
Elliott, Charles H., inspector	2,250.00
Emmons, Milton L., inspector	3,600.00
Fernandez, Joseph, inspector	1.00
Fisher, F. W., assistant machinery inspector	2,700.00
Ford, Francis J., assistant hull inspector	1,800.00
Frazier, Fred L., inspector	3,000.00
Garrett, E. A., inspector	1.00
Heacock, Clifford, assistant inspector	2,100.00
Holden, Charles F., inspector	2,400.00
Johnson, J. Harry, assistant hull inspector	2,160.00
Jones, O. T., inspector	1.00
Locke, T. Harold, assistant inspector	1,800.00
McIntosh, Peter, inspector	3,000.00
MacDowell, John, inspector	4,500.00
Parris, Roy F., assistant inspector of hulls	2,100.00
Parry, Capt. Evan, inspector	1.00
Ryerson, Otto, inspector	1,986.00
Stewart, William, assistant inspector	1,800.00
Stratton, Charles, inspector	2,100.00
Tinsley, William, inspector	1.00
Walsh, Francis, inspector	3,600.00
Walsh, James L., assistant hull inspector	1,800.00
Wesson, Henry M., inspector	3,600.00
West, James Z., assistant inspector	1,800.00
Wilson, George D., inspector	2,400.00

Senator JOHNSON. Mr. Piez, at the suggestion of Senator Jones, those contracts with those Pacific coast companies, they have been inserted in the record of this hearing; that is, contracts which provide for the construction of the yards and the payment therefor by the Government—of like character with the contracts which were made with the three companies on the Atlantic coast.

Mr. PIEZ. Yes.

Senator JOHNSON. I believe we have already in the record a copy of the contract with the American Internationl Shipbuilding Corporation, but there are similar contracts with two other companies on the Atlantic coast?

Mr. PIEZ. Yes; the Submarine Boat Co. and the Merchants Shipbuilding Corporation.

Senator JOHNSON. Yes; and, if not too inconvenient, will you not furnish the committee with copies of those two contracts in order that they also may go in the record at this place?

Mr. PIEZ. All right, sir.

Senator JOHNSON. Then the record will contain all the contracts whereby the Government constructs new yards?

Mr. PIEZ. Yes, sir.

Senator JOHNSON. Those are the only ones of the kind, are they not, Senator Jones?

Senator JONES. I think so.

(The two contracts referred to are here printed in full, as follows:)

CONTRACT FOR CONSTRUCTION OF STANDARD TYPE COMPLETE VESSELS, COST-PROFIT SHARING.

[Contract No. 86 S. C. Hulls 547–596, inclusive.]

Contract made this 14th day of September, 1917, between Submarine Boat Corporation, a corporation organized under the laws of the State of New York, party of the first part (herein called the Agent) and United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia (herein called the Owner), representing the United States of America, party of the second part.

Real estate.—Whereas the Owner is to be the lessee of a certain tract of land (hereinafter called the "Real Estate") situated at Newark, New Jersey, in what is known as the Port Newark Terminal Development, bounded by the City bulkhead on the north, the City bulkhead on the east, Port Newark Terminal Dock on the south, and the easterly line of Avenue R on the west, as shown in a blue print of Port Newark Terminal dated April 30, 1917—the said tract containing 112.79 acres, including areas of proposed streets, as shown on said blue print, and Whereas the Owner proposes to have constructed fifty or more cargo vessels of about five thousand (5,000) tons dead weight capacity, in accordance with certain plans and specifications; and Whereas the plans and specifications for said vessels, to be of uniform design, have been provided adopted, and approved by the Owner.

Now, therefore, this contract Witnesseth that for an in consideration of the mutual agreements herein the parties hereto covenant and agree to and with each other as follows:

I. Shipyard.—The Agent hereby agrees to construct, and thereafter during the continuance of this contract maintain, on the real estate such buildings (including such housing, hospital, sanitation, recreation, and commissary facilities as may be considered necessary by the owner), building slips, plant, and appurtenances as may be necessary for the establishment of a ship-assembling yard and for the construction of two hundred (200) vessels in accordance with the aforesaid plans. The arrangement of buildings, building slips, plant, and appurtenances shall be in accordance with plans and schedules to be mutually agreed

upon by the parties hereto, and the construction thereof shall be subject to the inspection of the owner. The buildings, building slips, plant, and appurtenances so constructed shall be and remain the property of the owner. The shipyard thus constituted shall be employed exclusively by the Agent (except as provided in Articles IX and XXVIII hereof) during the life of the contract on vessels for the Owner, and the Agent shall undertake no work for other parties at the shipyard, except with the written approval of the General Manager of the Owner.

The Owner reserves the right to reduce, by written order given to the Agent at any time within sixty (60) days from and after the date of the execution of this contract, the proposed shipyard to such size and capacity as may be necessary for the construction of fifty (50) vessels only and in the event that the Owner exercises this right, the Agent shall comply with the foregoing terms of this Article as modified by such order.

II. Organization.—The Agent will as expeditiously as possible organize a force of workmen, superintendents, and the administration necessary to carry out to completion the building of the vessels herein contracted for.

III. Construction of vessels.—As soon as the shipbuilding plant and organization are sufficiently advanced the Agent shall proceed with the construction of fifty (50) cargo vessels, each of about five thousand (5,000) tons dead-weight capacity, except as such number may be reduced under the provisions of Article X hereof, in accordance with the plans and specifications aforesaid, which are hereto attached and hereby made a part of this contract. The construction of said vessels (the word vessel as used throughout this contract being intended to include everything covered by the plans and specifications above referred to) shall conform in all respects to the aforesaid plans and specifications, including duly authorized changes therein. Said vessels shall be provided with fittings, equipment, machinery, devices and appliances, and appurtenances of every kind with latest improvements, complete in all respects and ready for service, as provided for in the specifications, and shall be delivered to the Owner afloat at the shipyard in Newark, New Jersey.

Alterations.—The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions in the plans and specifications not materially affecting the general design of the vessels as the Owner may deem necessary. The Agent agrees to accede to and carry the same into effect as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. If by reason thereof the actual cost of the construction hereunder shall be increased, then the estimated basis cost shall be correspondingly increased. If the construction shall be rendered less expensive by reason thereof, the estimated basis cost shall be correspondingly decreased. The time for completion of each vessel shall be extended or decreased as conditions of the work may justify.

IV. Time of delivery of vessels.—It is agreed by both parties that time is of the essence of this contract. The Agent agrees to begin and carry through to completion the work herein contracted for with dispatch. The Agent hereby agrees to complete said vessels and to have them ready for delivery to the Owner in accordance with the following schedule, viz:

Schedule of deliveries.

Number of vessels.	Keels laid during—	Launched during—	Delivered during—	Total.
3	December, 1917	March, 1918	June, 1918	3
4	January, 1918	April, 1918	do	7
6	February, 1918	May, 1918	July, 1918	13
6	March, 1918	June, 1918	August, 1918	19
10	April, 1918	July, 1918	September, 1918	29
10	May, 1918	August, 1918	October, 1918	39
6	June, 1918	September, 1918	November, 1918	45
5	July, 1918	October, 1918	December, 1918	50

The above proposed deliveries are based on an understanding that the shipyard shall be constructed and equipped substantially as indicated on the plans already submitted, and that all main propelling machinery, main boilers, deck machinery, pumping outfits, and so forth, shall be delivered into the Agent's possession at the shipyard, at least sixty (60) days prior to the above delivery

dates, and that the propelling shafting and propellers shall be in the Agent's possession at leat ninety (90) days prior to the delivery dates above given.

Premiums and liquidated damages.—Should the Agent have completed and ready for delivery to the Owner any of said fifty (50) vessels before the times provided in the above schedule, the Owner agrees to pay as premium for earlier delivery for each completed vessel so delivered the sum of Three Hundred Dollars ($300) for each and every day gained by such early delivery. Should the Agent fail to have ready for delivery any of the said fifty (50) vessels within the period specified for its delivery in the foregoing schedule, the Agent agrees to pay to the Owner (as liquidated damages) on each vessel not completed and ready for delivery within said scheduled period Three Hundred Dollars ($300) for each and every day of delay in delivery of such completed vessel, but it is hereby agreed that the total premium so to be paid for any vessel shall, in no case, exceed the sum of Eleven Thousand Dollars ($11,000); and that the aggregate liquidated damages to be paid for any vessel shall in no case exceed the sum of Eleven Thousand Dollars ($11,000) or be in excess of such sum as will reduce the net fee to be paid to the Agent for each vessel as hereinafter provided for, below the average minimum fee mentioned in Article XXV hereof. Premiums or liquidated damages shall be added to or subtracted so far as possible from the final payment of the Agent's fee herein provided for.

Extensions of time.—If the Agent be delayed or obstructed in the performance or completion of the work provided for by this contract by the delay, neglect or default of the Owner, or by reason of alterations, or additions by the Owner, or by reason of delays due to compliance with the provisions of Articles III, XII, XXVII, XXVIII, and XXX hereof, or the commandeering by the United States Government of materials on the ground or materials purchased or contracted for by the Agent or Owner but not delivered, or of facilities for the transportation of material and/or laborers, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by any other cause beyond the control of the agent so that the time of delivery of any of the vessels shall be delayed beyond the scheduled period for its delivery, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof; provided that no such extension of time shall be granted for any particular delay unless the Agent shall, within ten (10) days after the occurrence of such delay notify the Owner in writing of intent to claim such extension.

All extensions of time for the delivery of any of the vessels herein contracted for shall correspondingly postpone the dates at which liquidated damages on account of delays in delivery shall begin to accrue, but premiums shall be paid only in the event of completion and delivery of the vessels within the times specified in the above schedule, and no extension of time for any cause whatever shall operate to entitle the Agent to premiums for early delivery, except that if the Agent shall establish to the satisfaction of the Owner that any delay has been caused solely because of changes ordered or instructions given by the Owner or because of any default of the Owner, the Owner will consider extending the time within which premiums may be earned by the Agent. PROVIDED, That if the Agent shall establish to the satisfaction of the General Manager of the Owner that actual delay in the completion of any of the fifty (50) vessels herein contracted for has been exclusively caused by the fitting out of wooden hulls as provided for in Article XXVIII, such delay will be regarded as extending by the length of such delay, the time in which premiums on each vessel so delayed may be earned by the Agent.

V. Contracts for material, etc.—The Owner reserves the right to control through its duly authorized representative all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement or in its own name to make any such order, purchase, or commitment, subject to advice to Agent so as to avoid duplication. All contracts and orders placed by the Agent shall be in the name of the Owner by the Agent.

Payment for materials.—Such materials and parts to be used in the construction of the shipyard and of the vessels as are ordered by the Owner and/or Agent shall be received and payment therefor made by the Agent from the funds deposited by the Owner as provided for in Article XVII, direct to the individual, firm, or corporation with whom the order has been placed at the price stipulated in the order and in accordance with such terms of payment as may be arranged by the Owner and/or Agent with such individual, firm, or corporation. Any amounts paid for materials and parts to be used in the

construction of the shipyard will enter into the cost of the shipyard. Any amounts paid for materials and parts to be used in the construction of the vessels will enter into the actual cost of the vessels, as hereinafter provided for.

Such materials and parts as are used in the construction of the vessels shall be of the quality and characteristics best adapted to the various purposes for which they may be used in so far as they conform to ths specifications and to the requirements of the American Bureau of Shipping and/or Lloyds. The Agent shall supply such assistance as may be required by surveyors of the American Bureau of Shipping and/or by Inspectors of Lloyds and/or of the Owner in making any tests and inspections of such material and parts at the shipyard considered necessary by such inspectors or surveyors.

VI. Workmanship.—The workmanship on said vessels in detail and finish in all parts shall be first-class, and of the very best quality usual in American seagoing vessels of this class, and shall at all times be subject to the inspection of the American Bureau of Shipping and/or Lloyds and of the Owner's inspectors as aforesaid, and the surveyors and inspectors may with the approval of the Owner or his duly authorized representative, direct the replacement of any unfit workmanship or materials if below the standard of the American Bureau of Shipping and/or Lloyds for vessels of this class.

VII. Inspection.—The vessels shall be inspected during the progress of the work by the surveyors of the American Bureau of Shipping and/or by the inspectors of Lloyds, and the inspection certificate of the highest rating of these organizations for seagoing vessels of this type must be obtained and furnished when the vessels are ready for delivery. Tonnage certificates in duplicate shall also be obtained from the Commissioner of Navigation and furnished at the time of delivery of the vessels to the Owner. All expenses of such inspection and certificates shall be considered as part of the actual cost of the vessel. In addition to the surveyors of the American Bureau of Shipping and/or inspectors of Lloyds, the Owner will employ at the Owner's expense, but not to be included in actual cost, one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these vessels. They and their assistants, described herein as the Owner's inspectors, will represent the Owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as representative of the Owner, and be designated as the District Officer, and to him shall be referred all questions arising under the contract at the shipyard. His decision on all important questions shall be in writing, and when rendered under his general authority or after approval by the Owner shall be binding, subject in all cases to appeal as provided in Article XXI hereof.

VIII. Trials.—When each vessel is substantially complete it shall be given a dock trial of not less than eight hours duration. Should any defects or deficiencies develop during such trial they shall be corrected by the Agent to the satisfaction of the Owner, and the dock trial repeated if considered necessary by the District Officer. The Owner may designate any ten (10) vessels as a group, and may select one vessel from such group to be tried on a measured mile course in the vicinity of the shipyard, in addition to the dock trial provided above, and its satisfactory performance as to speed and working of machinery shall be taken as representative of the speed and machinery performance of the ten vessels. If the vessel selected shall not satisfactorily perform such test the Owner may direct that any or all vessels of the group be given speed and machinery tests of a like character. The Agent agrees to take such additional steps as the Owner may require to increase the speed of any vessel up to the speed specified in the specifications.

Delivery.—After the satisfactory completion of the trials and of all other work included in the plans, specifications, and authorized changes, each vessel shall be delivered afloat to the representative of the Owner at the shipyard, and shall thereupon be accepted, and the Owner shall take possession of the vessel and be responsible for the safety thereof. The Owner shall remove such accepted vessel from the shipyard within such time as will prevent encumbrance of the water front or interference with the work on other vessels.

IX. Termination of contract.—In case of failure or omission of the Agent at any stage of the work prior to completion from any cause or causes within its control to go forward with the work or make progress toward its completion satisfactory to the Owner, the Owner may, except as qualified in the succeeding paragraph of this Article, terminate this contract. In that event the Owner may immediately enter the shipyard and take possession of it, and of the vessels, materials, and equipment, and also withdraw without the signature of the Agent any balance on hand in any Agent-Trustee account

established under Article XVII hereof, and shall assume all commitments properly chargeable to the work hereunder. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the vessels and of all materials on hand or ordered or contracted for and applicable thereto, and a copy of such statement and inventory shall be furnished to the Agent. Concurrently with the making of such statement and inventory, the Owner may proceed with the construction of vessels, either at the shipyard with its equipment and facilities or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner shall thus terminate this contract the total amount to be paid hereunder, including all payments theretofore made, shall be the actual cost (computed in the manner defined in Article XIX hereof) of all work done under this contract up to the time of termination, plus such part of the Agent's fees as the Owner may decide to have been justly earned.

Provided, however, That if within fifteen (15) days after written notice to the Agent by the Owner of the latter's intent to terminate this contract the Agent can show to the satisfaction of the General Manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which it had no control, the Agent shall be allowed such opportunity as the General Manager of the Owner may deem reasonable to complete the work.

X. Insurance.—The Agent agrees to procure, so far as procurable, and thereafter maintain such insurance, in such forms, on such property, to cover such contingencies, in such amounts, and for such periods as the Owner shall approve or require. The policies shall provide that the loss, if any, shall be payable to the Owner for the use of the Owner and/or the Agent, as their respective interests may appear. In the event that the Owner shall see fit to dispense with insurance, in whole or in part, on its own property, the estimated basis cost, as set out in Article XX, shall be diminished by such a sum as the General Manager of the Owner deems fair and just. Should any vessel be constructively or actually totally destroyed and/or a total loss, no additional vessel shall be built under this contract in order to replace it and to complete the fifty (50) vessels herein provided for. The Owner shall pay, within thirty (30) days after such total loss or destruction, to the Agent for its fee for work done on any such vessel, up to the time of such total loss or destruction, such sum as the General Manager of the Owner may determine to be fair and just.

XI. Casualty insurance.—The Agent agrees to insure to the satisfaction of the Owner, so far as insurance shall be procurable, against the liability of the Agent and/or the Owner for injuries to or death of employees, workmen, or the public or others in or about the work covered by this contract.

Patents.—The Agent shall to the best of his ability protect the Owner against claims for any infringements of patents or patent rights and for the use of any patented articles embodied or to be embodied in the vessels, by suitable agreement satisfactory to the Owner as to the use of such patents or patent rights. The Owner will assume all costs, expenses, and damages which it or the Agent may be obliged to pay to procure such agreements or to pay by reason of any infringement of patents or patent rights or the use of patented articles not covered by such agreements, pursuant to a decree by a proper Court in any litigation involving the use of such patents, but the Agent shall assist the Owner at the latter's expense, save for services of the Agent's employees, in furnishing such evidence as to the use of the patents and other matters of fact as may be required by the Owner in such litigation. The Agent shall promptly notify the Owner in writing of any claims of infringement that may from time to time be brought to the Agent's attention.

XII. Labor.—The Agent will comply with all instructions not contrary to law as to wages or conditions of employment of labor on this contract given to it in writing by the Owner. If by reason of any such instruction the cost of any vessel hereunder shall be increased, then the estimated basis cost shall be correspondingly increased as provided in Article XX. The Owner, in its discretion, will give such assistance as shall be within its power in securing and retaining the labor necessary for the work under this contract. The Agent will promptly notify the Owner of any labor difficulties.

XIII. Protection to property.—The Agent shall provide the usual protection for the property of the Owner and of the Agent at the shipyard, and shall furnish such additional protection as the Owner may require; such additional protection, however, shall be paid for by the Owner and shall not be included in

the actual cost of the work to be done under this contract for the purpose of comparison with the estimated or revised estimated basis cost.

XIV. Owner to use power for expedition.—The Owner will, in its discretion, use its influence and such powers as it may have by law to secure with the utmost practicable expedition and at the minimum cost consistent with the existing conditions, the facilities, utilities, parts, materials, and supplies required for the work under this contract, and will, in its discretion, also use its influence and powers to secure rapid and/or preferential transportation from any and all railroad companies and public-service companies for workmen, employees, materials, parts, and supplies required for the work.

XV. Title.—It is agreed that title to all vessels, either completed or under construction, in so far as they shall have been inspected and approved by the Owner, shall be in the United States of America, and that the title for all material for the furtherance of work under this contract, however, and by whomsoever contracted for or assembled or set up in the shipyard or used in the construction of work under this contract, shall be in the Owner at all times. Nothing contained herein, however, shall be construed as a waiver by the Owner of its right to direct the replacement of unsatisfactory workmanship and/or materials.

Inspector's certificates.—No inspector's certificate given or payment made under the terms of this contract (except on final payment) shall be conclusive evidence of the performance of this contract, either in whole or in part, and no payment shall be construed to be a waiver of the right of the Owner to direct the replacement of unsatisfactory workmanship and/or materials.

XVI. Liens.—The Agent will keep the vessels in the course of construction free and clear from all claims, liens, or encumbrances of any kind or description (except liens or encumbrances accruing through the default of the Owner, and/or for which the Owner shall be responsible, and except claims and liens of the Agent), and shall, before delivery of each vessel, show to the satisfaction of the Owner that such vessel is free and clear from any claims, liens, and encumbrances, except as aforesaid. The Agent agrees that it will, to the extent that funds are available under the terms of Article XVII, promptly pay for all labor, material, or other service rendered to it in connection with the work under this contract.

Agent to carry out terms of Owner's lease.—The Agent shall in the performance of its agreements hereunder observe and comply with the conditions (other than those which provide for rent and other payments) of the Owner's lease hereinbefore mentioned.

XVII. Payment of actual cost.—The total actual cost (as defined in Article XIX) of constructing said buildings, building slips, plant, and appurtenances, and the total actual cost of constructing the vessels herein contracted for, shall be paid by the Owner to the Agent as follows:

Establishment of cash fund.—In order to provide the cash funds necessary for carrying on the work under this contract, the Owner will from time to time deposit in advance to the credit of the Agent as Trustee for the purposes of this contract, in such bank or banks as may be agreed upon, such sums as may be necessary to constitute and to keep constituted a fund from which to finance the work, to provide for payments to be made for the buildings, building slips, plant, and appurtenances to be erected and installed on the real estate, for rents and other money payments required to be made under the aforesaid lease, and for materials, and for wages and salaries of persons employed upon the work hereunder on the shipyard and the vessels at the shipyard. Such sums shall be drawn upon only by checks countersigned by the District Officer or the Owner's representative for payments to be made by the Agent under this contract, and each payment shall be charged against the buildings, building slips, plant, and appurtenances the property of the Owner, or as a payment on account of the cost of the vessels, as the case may be. Any interest paid by the bank or banks on such deposits is the property of the Owner, and upon the final completion of this Contract the Owner may withdraw without the signature of the Agent any balance on hand in any Agent-Trustee account established under this Article.

Indemnity bond.—Concurrently with the making of the first deposit in the Agent-Trustee account herein provided for, the Agent shall file with the Owner an indemnity bond conditioned upon the proper application, so far as the Agent is concerned, of all funds placed to the credit of the Agent as in Article XVII provided, and such indemnity bond shall be in the sum of Fifteen Hundred Thousand Dollars ($1,500,000), with a surety company or companies acceptable to the Owner as surety.

Other payments.—For other items of actual cost, including those incurred in outside offices, chargeable to the work under this contract but not paid from the aforesaid funds, payment shall be made to the Agent by the Owner monthly within fifteen (15) days after the submission of bills covering such actual costs, certified to by the District Officer. The Agent's fee shall be payable at the times and in the manner specified hereinafter.

XVIII. Accounts.—The Agent shall establish and keep suitable accounts and records, which shall show the actual cost of all the work under this contract. The preservation of said accounts and records for a reasonable time shall be provided for by agreement of the parties at the termination of this contract.

The accounts and records of the Agent shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and costs hereunder shall be made by the Agent in such form and supported by such original papers as may be required by the General Manager of the Owner. The methods and principles of keeping costs shall be adequate for the determination of actual costs. All information obtained from the accounts and records shall be treated as confidential.

Auditors.—The Owner may send Auditors to the shipyard and to the Agent's offices to supervise and assist in the accounting.

Account and inventory of plant.—The actual cost of constructing the buildings, building slips, plant, and appurtenances and alterations and additions thereto shall be computed in the manner defined in Article XIX hereof and shall be kept in a separate detailed plant cost account and inventory.

Account of vessels.—The actual cost of the fifty (50) vessels herein contracted for shall also be computed in the manner defined in Article XIX hereof and shall be kept in such manner and segregated into such items as may be necessary for the purposes of this contract and as may be agreed upon, and particularly as may be necessary for the ascertainment of the Agent's average fee on each vessel herein provided for.

XIX. Actual cost.—For the purposes of this contract actual cost whether of the construction of the shipyard or of the construction of vessels (the latter to include the maintenance and operation of the shipyard in its entirety) is defined as follows:

1. The net costs, after deducting all discounts, rebates, and refunds obtained of supplies, materials, machinery, tools, equipment, and parts thereof directly entering into or expended in the execution of the work, including freight and other transportation costs of materials and of the other items in this paragraph enumerated.

2. Costs of direct labor employed in the execution of the work.

3. Overhead expenses. These shall be taken to include indirect labor and materials and the general and administrative expenses and other expenses applicable to and necessary in connection with the execution of the work herein contracted for (including inactual cost the maintenance operation, and repair of buildings, building slips, plant, and appurtenances).

Specifically, the overhead expenses shall include the following:

(*a*) All items of overhead expense contained in the schedule of the estimated basis cost annexed to and forming part of this contract, with such modifications as may be mutually agreed upon, but in accordance with the general principles laid down in this Paragraph 3.

(*b*) Rents and other items to be paid under and for the aforesaid lease from the City of Newark to the Owner. Taxes and assessments of every kind (except for permanent improvements) arising from any of the operations included in the work to be done under this contract, including license fees, but excluding all Federal taxes, which latter shall be borne by the Agent without reimbursement.

(*c*) Subject to the rules hereinafter stated, transportation of labor and/or employees, salaries and expenses of the Agent's General Manager, purchasing and traffic agencies, engineering and drafting forces, and accounting and clerical forces employed and maintained by the Agent at the shipyard exclusively on the work hereunder, and an equitable proportion of salaries and expenses of other similar agencies and forces employed and maintained by the Agent elsewhere: but the Agent's fee herein provided for shall cover the services of its Executive Officers, who for the purposes of this contract shall be deemed to include its President, its Board of Directors, Vice Presidents, Treasurer, and Secretary, and their respective assistants not immediately attached to the shipyard, and their salaries and emoluments shall not be chargeable to the work under this contract.

(*d*) The cost of casualty and liability insurance and the cost of such bonds, fire and other insurance as the Owner may approve or require; losses due to accidents or casualties not compensated by insurance or otherwise and legal and other expenses in connection therewith sustained or incurred by the Agent, including the cost of settlements made with the approval of the Owner, and the cost of the removal and replacement of defective or unsatisfactory workmanship or materials, but if any such losses and expenses and/or necessity for any such replacement shall be caused by the fault or neglect of the Agent's executive officers, managerial and superintending employees, foremen and leading men, there shall be deducted from the Agent's fee such part of such losses and/or cost of such replacement as, together with deductions under Articles IV and XX, shall not result in an aggregate average deduction from such fee of more than eleven thousand dollars ($11,000) for each vessel or reduce the Agent's average fee for vessels constructed hereunder below the minimum fee provided for in Article XXV hereof.

The following rules are hereby mutually agreed to and shall be followed with reference to actual cost:

Excessive and unusual salaries or emoluments shall not be paid by the Agent or charged as a part of the actual cost.

The overhead charges incurred in the work under this contract shall be equitably prorated between and charged to the actual cost of the shipyard and the actual cost of the vessels, as the case may be.

The buildings, building slips, plant, and appurtenances being the property of the Owner, no charge on account of their use by the Agent shall be made, nor shall any charge for depreciation of such buildings, building slips, plant, and appurtenances be allowed as part of the cost to the Agent, but such repairs, renewals, and upkeep to the buildings, building slips, plant, and appurtenances as may be necessary during the life of this contract shall be considered as part of the overhead expense on the vessels as aforesaid.

All materials and supplies purchased for but not used in the construction of the vessels herein contracted for shall be and remain the property of the Owner and the value thereof shall be credited on the cost of the vessels. The salvage value of scrap, waste, containers, etc., originally purchased for the shipyard and/or vessels and disposed of during the life of the contract shall be credited to the cost of the shipyard and/or of the vessels, as the case may be.

All revenue, if any, from the operation of the camp, commissary, hospital, and other facilities, or from rebates, refunds, etc., shall be accounted for by the Agent to the Owner and applied in reduction of the cost of the vessels or of the buildings, building slips, plant, and appurtenances, as the case may be.

XX. Agent's fees.—The amount of the fee to be paid the Agent (subject to additions or subtractions as provided in this contract) is based upon a schedule of the estimated basis cost of each of said fifty (50) vessels to be constructed under this contract, which is hereto annexed and forms part of this contract.

Estimated basis cost.—Such estimated basis cost is Seven hundred and fifty thousand dollars ($750,000.00) as set forth in said schedule containing the estimated costs of labor, of materials, and of overhead expense. Should the actual cost of materials and/or the rates of wages paid be different from those set forth in the aforesaid schedule, then the total estimated basis cost shall be revised as follows: the estimated total basis cost of materials shall be increased or diminished by the actual amount of the change in cost of the materials, and the estimated total labor cost shall be increased or diminished in the ratio that the rates of wages actually paid bear to the original schedule rates of wages. The estimated basis cost shall also be revised on account of any changes ordered as provided in Articles III, XII, XXVII, and XXX. Should such revisions be made the new estimated basis cost shall be considered as the revised estimated basis cost.

Amount of fee.—Should the actual cost as ascertained by audit of the books and accounts of the Agent be equal to the revised estimated basis cost, the aforesaid fee payable to the Agent shall be Thirty-seven thousand five hundred dollars ($37,500.00) on each of said fifty (50) vessels completed if there be no additions and/or subtractions under any of the other provisions of this contract. Should the actual cost upon audit be less than the revised estimated basis cost, such saving shall be divided into three equal parts, one of which shall accrue to the Agent, one to the Owner, and the third shall be distributed in such manner as may be directed by the Owner, with a view of recognizing faithful and efficient performance of duty on the part of workmen and employees. Should the actual cost as ascertained by the aforesaid audit be greater than the revised estimated basis cost, one-half of such increase shall be deducted from the

Agent's fee aforesaid, and the remainder shall be borne by the Owner, PROVIDED, that in no case shall the Agent's average fee for each completed vessel, after making all deductions and/or additions provided for in any article hereof, be less than the average minimum fee mentioned in Article XXV hereof.

Fee, when payable.—Said fee on each vessel shall be payable to the Agent as follows: viz, one-half of the minimum fee mentioned in Article XXV when the vessel is half finished as certified to by the District Officer, or otherwise established to the satisfaction of the General Manager of the Owner; and the other half of such minimum fee upon the completion of satisfactory trials, and the remainder, if any, upon audit of the actual cost of each of the vessels as above provided for.

XXI. *Option to order additional steel vessels.*—The Owner may at its option, at any time not less than sixty days prior to the completion of all vessels theretofore contracted for or ordered under this contract, order additional vessels of the same type or the same or greater deadweight capacity to be built by the Agent at the shipyard. The Agent shall give the Owner fifteen days' notice in writing of the expiration of the time for the exercise of the Owner's option to order additional vessels. Except as to the times for delivery, estimated basis cost, the amount of the Agent's fee, and the plans and specifications, such additional vessels shall be constructed under the terms and provisions covering the first fifty vessels of this contract. Should the Owner order additional vessels, the shipyard shall be used and the actual cost of the vessels be paid for in the manner herein provided for the first fifty vessels under this contract. The estimated basis cost for each of the first hundred and fifty (150) or lesser number of such additional vessels of the same type and size as the first fifty vessels herein contracted for shall be seven hundred and twenty thousand dollars ($720,000.00); the Agent's fee for the construction of each vessel thereof shall be thirty-six thousand dollars ($36,000.00), to which shall be added the savings and/or premiums, and from which shall be subtracted the deductions and/or liquidated damages, as provided in other articles hereof; in no case shall the premiums on the one side or the liquidated damages and/or deductions on the other side exceed an average of eleven thousand dollars ($11,000.00) for each vessel; and the minimum average fee shall be twenty-five thousand dollars ($25,000.00). For all other additional vessels, other than the one hundred and fifty vessels last above referred to, which may be ordered by the Owner hereunder, the estimated basis cost, the Agent's fee, plans and specifications, and times of delivery shall be the subject of mutual agreement, but the Agent's fee shall in no case be greater for the same size and type of vessel than the fee in this Article XXI, provided for

XXII. Disputes.—In case the parties fail to agree as to any matter connected with this contract or any doubt or dispute arises as to the meaning, construction, or effect of this contract, or of any of the provisions or covenants hereof, or of the plans and specifications or any part or parts thereof which are a part hereof, or as to the manner of doing the work provided for hereunder, or as to the materials used or to be used or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by the General Manager of the Owner, and his decision in writing shall be final and binding upon the parties except as next hereinafter provided.

In case after delivery of a completed vessel to the Owner under this contract (but only in that event) the Agent shall deem that it is aggrieved by any decision of the General Manager as to any disputed matter hereunder of any kind regarding such vessel, and shall give written notice to the Owner to that effect within thirty (30) days afer delivery of such vessel to, or after final payment of such vessel by the Owner, and/or in case after completion of all work of constructing or altering the shipyard (but only in that event), the Agent shall deem that it is aggrieved by any decision of the General Manager as to any disputed matter hereunder of any kind regarding such construction, and shall give written notice to the Owner to that effect within thirty (30) days after completion of all such construction, such matter shall be determined by a Board which shall consist of three disinterested naval architects or engineers or experts to be appointed, one by the Owner, one by the Agent, and the third by the two so appointed. Such Board shall within 30 days after submission of such matter to it make its determination, and its finding (made by a majority of the Board) shall be conclusive on both parties. Provided, however, that if the Agent fails to notify the Owner in writing of its intent subsequently to appeal any decision of the General Manager adverse to it within 10 days after written notice of such adverse decision the decision of the General Manager shall become final and binding upon both parties without

appeal to the Board herein provided for. The cost of any such arbitration shall be borne equally by the Owner and the Agent.

XXIII. Not assignable.—This contract shall not, nor shall any interest herein, be transferred by the Agent to any other person or persons save with the consent of the Owner in writing.

XXIV. Notices and payments by mail.—All notices in writing from the Agent to the Owner shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to the United States Shipping Board Emergency Fleet Corporation at Washington, D. C., or be delivered personally to an executive officer or the District Officer of the Owner.

All notices in writing from the Owner to the Agent shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to Submarine Boat Corporation, 5 Nassau Street, New York City, or be delivered personally to an executive officer of the Agent.

Payments hereunder required to be made direct to the Agent shall be made by the Owner by check addressed to the Agent by mail at 5 Nassau Street, New York City.

XXV. Minimum fee.—It is the intention of this contract that notwithstanding any other provision thereof, the Agent's fee shall average not less than twenty-six thousand five hundred dollars ($26,500.00) for each vessel completed and accepted, but this shall apply only to the fifty vessels first provided for; and the Agent's fee for the first one hundred and fifty (150) or lesser number of additional vessels of the same type and size as the aforesaid fifty (50) vessels shall average not less than twenty-five thousand dollars ($25,000) for each such vessel of the same type and size as the aforesaid fifty (50) vessels completed and accepted as provided in Article XXI hereof.

XXVI. Protection of Owner's interests.—The Agent, in all its acts hereunder, shall use its best efforts to protect and subserve the interests of the Owner. The Agent hereby agrees that it will procure all necessary permits and licenses and obey and abide by all laws, regulations, ordinances, and other rules applying to such work of the United States of America, of the State or Territory wherein such work is done, of any subdivision thereof, or of any duly constituted public authority.

XXVII. Control by Owner.—The Agent shall, in the performance of its agreements hereunder, comply with and be bound by all directions, instructions, and decisions of the Owner, or its authorized representatives; and compliance by the Agent with any such direction, instruction, or decision shall be a justification and protection to the Agent for any action so taken.

XXVIII. Wooden Hulls.—The Owner may, when the construction of vessels hereunder will not thereby be materially delayed, bring to the shipyard wooden hulls for the purpose of installing machinery therein and equipping them ready for use. The Owner may at its option do such work itself, or may, upon terms to be mutually agreed upon, require the Agent to do it.

XXIX. Participation in profits.—No Member of or Delegate to Congress or Resident Commissioner is or shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this article shall not apply to this contract so far as it may be within the operation or exception of Section 116 of the Act of Congress approvad March 4, 1909 (35 Stats., 1109).

XXX. Provisions to be added if desired.—This contract is executed and delivered upon the understanding that, if desired by the United States Shipping Board Emergency Fleet Corporation, a provision, satisfactory in form and terms to the United States Shipping Board Emergency Fleet Corporation, restricting the hours of labor of laborers and mechanics employed by the Agent or by subcontractors and (or) providing for the payment of extra compensation for overtime work, will be inserted in the contract with the same force and effect as if inserted in the contract before the execution and delivery thereof.

XXXI. Contract not effective until execution of lease to Owner.—This agreement shall not be binding upon either party until the Agent and the City of Newark shall have executed a cancellation of the existing leases between the said City and the Agent covering said "real estate," nor until the Owner and the City of Newark shall have executed a lease from the latter to the former covering the "real estate," both agreement of cancellation and lease to be in form satisfactory to the attorneys for the Owner. And the Owner and the Agent agree that they will use their best effots to cause such ageement and lease to be executed. When this contact shall become binding as hereinabove provided, the Owner shall pay the Agent the sum of seventeen thousand seven hundred and eighty dollars ($17,780) for rent to December 15, 1917, paid by

the Agent to the City of Newark under the leases of the latter to the former and also to reimburse the Agent for expense of securing said leases, and the sum so to be paid shall be charged as an overhead charge of the fifty (50) vessels herein provided for.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

[SEAL.] SUBMARINE BOAT CORPORATION,
By HENRY R. CARSE, *President.*

Attest:

THOMAS C. DAWSON, *Secretary.*

Countersigned:

HENRY R. SUTPHEN, *Director.*

[SEAL.] UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
By EDWARD N. HURLEY, *President.*

(O. K. W. L. C.)

Attest:

LESTER SISLER, *Secretary.*

Estimated basis total labor cost on 5,000-ton ship.

1. Material f. o. b. yard, details attached	$350,000
2. Direct labor (schedule of hourly rate paid in New York attached)	200,000
3. Overhead (schedule of items attached)	200,000
Total	750,000

Estimated basis total material costs on 5,000-ton ship.

Hull material:	
Steel material, 3,250,000 pounds net weight (waste 5 per cent), at 2¼ cents per pound	$84,000
Freight on steel to fabricating shops and assembly shipyard	17,600
Forgings, stem and stern frames, and cast rudder	10,800
Spoiled material	2,600
Launching cradle and upkeep material	3,600
Total	118,600
Machinery, main, auxiliary, and deck:	
1 Westinghouse 1,500 S. H. P. turbine, reduction gear and oiling equipment, oil cooler; condensers, main and auxiliary, including complete vacuum system on main condenser; propeller shafting with shaft bearings; pedestal and stern tube; list of spare parts as specified; electrical apparatus, including 10-kilowatt generator with turbine, switchboard, and searchlight; total cost	89,000
Freight on above machinery to plant	500
2 B. & W. boilers complete with spare parts and tools	35,000
Oil burners and equipment, including piping, heaters, strainers, pumps, and spares complete; uptakes and stack	6,750
Freight on above to plant	300
Pumping machinery, including two feeds, bilge and ballast, fire, fresh water, sanitary, evaporating feed auxiliary condenser air and circulator, injector, feed water heater, evaporator, at total of	4,534
Freight on above to plant	150
Electric wiring, installation, fixtures, etc	1,000
Fire system, pipe lines, hydrants, hose, and racks	900
Plumbing fixtures and connections	1,100
Bilge and ballast systems	6,000
Engine and boiler room piping, auxiliary steam and exhaust lines, deck machinery piping, sanitatary system, fresh-water system	19,166
Refrigerating system and boxes complete	1,600
Ladders, floor plates, and gratings	2,800
Windlass	3,500
Capstan aft	900
Ten winches	8,500

Steering engine and gear, spare tiller, steering wheels, stands and shafting	$4,900
Freight on above	500
Total	187,100
Miscellaneous material, steel castings, and miscellaneous fittings:	
Joiner work, ship carpentering, hatch covers, hold shieldings, deck castings, miscellaneous fittings; freight	17,000
Propellers, spares, engine telegraphs, pipe covering, insulation over boilers, miscellaneous fittings; freight	5,500
Lifeboats, 4, 24-foot	2,600
Davits, 4 pair round bar forged	1,000
Pantry outfit, bedding and furnishings	4,000
Ventilators	2,000
Painting, running lights, tiling, cementing, coatings, heating system, awnings, masts and rigging, anchors, cables, ropes, hawsers, with freight	12,000
Total	44,300
Grand total	350,000

Shipyard wage rates in New York.

HOURLY RATES FOR STEEL WORKERS, EIGHT-HOUR DAY BASIS.

Ship fitter, foreman	$0.56
Ship fitter	.50
Ship fitter, helper	.25
Ship fitter, apprentice	.33
Hand riveter	.49
Hand holder-on	.42
Machine riveter	.46
Machine holder-on	.38
Rivet heater	.29
Passer boy	.23
Reamer	.40
Driller	.42
Chipper and calker	.49
Acetylene welder	.53
Erector gang leader	.30
Laborer	.53
Bolter-up	.34
Erector	.375
Puncher	.47
Planer	.47
Countersink	.38
Roller	.50
Gang foreman	.38
Helper	.30
Burner	.47
Boiler makers:	
Foreman	.60
All-around	.49
Riveter	.49
Chipper	.49
Calker	.49
Holder-on	.42
Flange turner	.62
Layer out	.64
Helper	.30
Boiler coverer	.40
Brass molder	.47
Burner and welder	.50
Carpenter	.53
Helper	.32
Calker	.53
Helper	.32
Core maker	$0.36
Coppersmith	.55
Helper	.30
Dock hand	.39
Electrician	.49
Helper	.28
Engineer	.47
Forage (large):	
Blacksmith	.69
Heater	.42
Helper	.39
Forge (small):	
Blacksmith	.54
Helper	.37
Gilder and letterer	.42
Ironworkers:	
Riveter	.49
Fitter	.50
Chipper	.49
Calker	.49
Holder-on	.40
Driller	.42
Passer	.30
Heater	.30
Helper	.30
Joiner	.53
Helper	.32
Laborer	.30
Machinist, outside	.52
Foreman	.58
Helper	.30
Machinist, inside:	
Foreman	.58
Lathe	.49
Drill	.47
Bench	.47
Floor	.47
Planer	.52
All-around	.52
Erectors	.50
Boring mill	.52
Helper	.30

Painter	$0.42	Ship rigger	$0.40
Pattern maker	.57	Tapper	.40
Pipe fitter	.48	Toolmaker	.50
Helper	.30	Tinsmith	.50
Plumber	.55	Helper	.30
Helper	30	Watchman	.30
Scaler	27		

It is assumed that this schedule is the one which was in force at the Downey Shipbuilding Corporation on June 30, 1917. Should any discrepancies develop corrections will be made accordingly. (H. R. C., president. W. L. C.)

SCHEDULE OF OVERHEAD EXPENSES.

Administration salaries and expenses.
Clerical and office salaries.
Supervision of productive work.
Technical supervision.
Technical and shop inspection.
Inspection and certificates of registration societies.
Insurance—fire, accident, marine, personal injury, liability, compensation, etc.
Protection, guards, etc.
Accounting.
Cost accounting.
Experimental work.
Expense of obtaining employees.
Welfare.
Office rent and supplies.
Traveling expenses.
Postage, telephone, and telegraph.
Legal expenses.
Subscriptions to technical publications.
Transportation of men to and from shipyard.
Clearing and care of yard and shop.
Rental of real estate and office.
Purchase expense.
Templates.
Stores charges.
Laying out and mold-loft work.
Freight, expressage, and demurrage (not directly chargeable).
Drafting and listing.
Traffic chasing and routing.
Light, heat, water, and power.
Temporary light and wiring (not directly chargeable).
Yard and shop service.
General supplies for yard and shops.
Tests, inspections, and trials certificates.
Repairs, maintenance, and renewal to plant.
Small and loose tool equipment charges.
Pattern lumber.
Royalties and patent rights.

NOTE.—Overhead for accounting purposes may be divided into shop, indirect and general overhead, and all other items of expense not charged to material or labor of the vessel or the cost of the yard.

Total, $200,000.

All other items of expense not a direct charge to material or labor cost of the vessels, or to the original cost of the shipyard plant. (H. R. C., president. W. L. C.)

[Contract No. 86 S. C.; 50 vessels, hull Nos. 547–596, inclusive; option exercised Nov. 16, 1917, for 100 additional vessels, hull Nos. 785–884, inclusive.]

NOVEMBER 16, 1917.

SUBMARINE BOAT CORPORATION,
Nassau and Pine Streets, New York City.

One hundred additional vessels.

GENTLEMEN: Your letter of November 2 on the above subject has been received, and the arguments advanced by you against the construction of addi-

tional vessels in your yard of different design from those now already contracted for have been given careful consideration.

You are hereby awarded a contract for 100 additional vessels of the same size and type as those which you are now constructing under the provisions of contract No. 86, dated September 14, 1917, all as provided for under the terms of Article XXI of the above contract.

You will please at once submit a schedule of times for delivery of these additional 100 vessels, in order that such matters in the contract as are affected by the times of delivery may be adjusted.

In view of the corporation's decision herein contained, not to alter the type of vessel to be built in your yard, you will please complete all matters relating to the construction of your plant on the basis of ships of the size already awarded to you, namely, 5,000 tons dead-weight. The corporation understands that no additional allotment for the construction of your plant will be necessary because of this additional award. It is also understood that the restriction of your plant to this type of vessel will decrease the actual cost of the construction of the ways over that which would be required for larger vessels.

These additional vessels are awarded subject to the approval by the Emergency Fleet Corporation of the schedule of deliveries which you may propose, and it is expected that you will fulfill the offer contained in your letter above referred to, that by the awarding of this additional contract you will be enabled to deliver 75 vessels by December 31, 1918, instead of the 50 provided in your present contract.

Your prompt acknowledgment of this communication is requested, in order that your acceptance may be attached to the original contract and form a part thereof.

Yours, very truly,

W. L. CAPPS, *General Manager.*

CC to Legal Division, Mr. Bender, Mr. John Hunger, and Purchasing Division.

SUBMARINE BOAT CORPORATION,
New York, November 20, 1917.

Rear Admiral W. L. CAPPS, United States Navy,
General Manager United States Shipping Board,
Emergency Fleet Corporation, Washington, D. C.

One hundred additional vessels.

DEAR SIR: We are in receipt of your esteemed favor of November 16, awarding to the Submarine Boat Corporation a contract for 100 additional vessels of the same size and type as those which are now being constructed under the provisions of contract No. 86, dated September 14, 1917, as provided for under the terms of Article XXI of said contract, which award we accept.

In order to meet your desire to have 75 vessels delivered by December 31, 1918, we propose for your approval the following amended schedule of times for delivery of the total order for 150 vessels:

Number of vessels.	Keels laid during—	Launched during—	Delivered.	Total.
3	December, 1917	February, 1918	June 30, 1918	3
4	January, 1918	March, 1918	....do	7
6	February, 1918	April, 1918	July 31, 1918	13
10	March, 1918	May, 1918	Aug. 31, 1918	23
12	April, 1918	June, 1918	Sept. 30, 1918	35
14	May, 1918	July, 1918	Oct. 31, 1918	49
14	June, 1918	August, 1918	Nov. 30, 1918	63
12	July, 1918	September, 1918	Dec. 31, 1918	75
10	August, 1918	October, 1918	Jan. 31, 1919	85
10	September, 1918	November, 1918	Feb. 28, 1919	95
10	October, 1918	December, 1918	Mar. 31, 1919	105
10	November, 1918	January, 1919	Apr. 30, 1919	115
10	December, 1918	February, 1919	May 31, 1919	125
9	January, 1919	March, 1919	June 30, 1919	134
8	February, 1919	April, 1919	July 31, 1919	142
8	March, 1919	May, 1919	Aug. 31, 1919	150

The above proposed deliveries are based on an understanding that the shipyard shall be constructed and equipped substantially as indicated on the plans already submitted and that all main propelling machinery, main boilers, deck machinery, pumping outfits, and so forth, shall be delivered into the agent's possession at the shipyard at least 60 days prior to the above delivery dates, and that the propelling shafting and propellers shall be in the agent's possession at least 90 days prior to the delivery dates above given.

In relation to the reduction of the estimated basis cost for the additional 100 vessels to $720,000 each vessel, instead of $750,000, the estimated basis cost for the order for 50 vessels which we are constructing:

The schedule of direct labor should be reduced 4 per cent from a total of $200,000 to	$192,000
The schedule of overhead should be reduced 4 per cent from $200,000 to	192,000
The schedule of material costs f. o. b. yard should be readjusted by a reduction of 4 per cent in each and every item in said schedule from a total of $350,000 to	336,000
Total	720,000

The wage rates for labor, also the schedule of overhead expenses, are not changed, the only change in relation to these schedules being in the total amount provided for.

We note your instructions to complete all matters relating to the construction of the plant at Newark Bay on the basis of ships of the size awarded to us, namely, 5,000-ton dead-weight, and the matter will have the most careful attention, and it will be our endeavor to decrease the cost of ways in every way possible and not to ask for additional allotment for construction of plant because of this additional award for 100 ships.

Awaiting your concurrence in the foregoing,

HENRY R. CARSE, *President.*

NOVEMBER 22, 1917.

SUBMARINE BOAT CORPORATION,
New York, N. Y.

One hundred additional vessels.

GENTLEMEN: We are in receipt of your letter of November 20 on the above subject in reply to the Emergency Fleet Corporation's letter of November 16.

The schedule of deliveries which you propose in your above-mentioned letter is approved, and this letter has been attached to and will form part of your original contract.

Referring to the last part of the next to the last paragraph of your letter, to the effect that you have not asked for additional allotment for construction of plant because of this additional award for construction of ships, your attention is invited to the fact that your estimate on the plant now being erected was on basis of 200 ships, and the building of 150 ships ought to decrease instead of increase the plant expenditures under normal condition.

Yours, very truly,

W. L. CAPPS, *General Manager.*

CC to Legal Division, Mr. Bender, Purchasing Division, and Mr. John Hunter.

[NOTE: "Owner," Emergency Fleet Corp. "Agent," Submarine Boat Corp. Contract 86 SC. Sept. 14, 1917.]

SUBMARINE BOAT CORPORATION.

(New York Corporation, Newark, N. J.)

Work to be done: (*a*) 150 cargo vessels (originally 50, changed by exercise of option dated Nov. 20, 1917, to 150). 5,000 tons d. w. c. Owner's plans and specifications. (P. 1.) Agent to construct plant and organize necessary force (Art. I, II.)

(*b*) Owner may use plant to install machinery and wood hulls or require agent to do so on terms to be fixed (Art. XXVIII).

Deliveries: Afloat shipyard Port Newark Terminal (Art. III, p. 3) after dock trial and, if desired, sea trial for one of each 10 vessels (Art. VIII) as follows: (See schedule next page.) Proposed deliveries based on agent obtaining propelling machinery, boilers, etc., 60 days prior to specified delivery dates and propelling shafting and propellers 90 days prior to delivery dates. (Art. IV, p. 4.)

Purchase price: Owner pays (*a*) cost of plant (not including real estate); (*b*) cost of vessels (Art. XVII, p. 14); (*c*) agent's fee (Art. XX).

Actual cost: Actual cost is defined (Art. XIX). It includes direct labor, materials and overhead.

(*a*) Plant cost is separated from vessel cost (Art. XVIII, p. 16). Overhead is prorated between them (Art. XIX, p. 18).

(*b*) Cost of vessels includes rent of real estate (p. 17, b), maintenance and operation of shipyard (Art. IX, p. 16).

(*c*) No charge is made for the executive salaries of the agent (p. 17, c). If number of agent's force is used on other work, overhead prorated (Ib.).

(*d*) Federal taxes are borne by the agent (XVII, b).

Extra charges (borne by Owner but not included in actual or estimted cost): (1) Additional protection to plant (Art. XIII, p. 12), (2) Owner's inspectors (Art. VII, p. 8).

Estimated cost of vessel, $720,000 per vessel. (Originally $750,000, but when option exercised reduced to $720,000.) (Option, p. 3.) Subject to increase or decrease as follows: (*a*) Wages varying from schedule; (*b*) materials varying from schedule; (*c*) changes due to alteration (para. 3, p. 3); (*d*) compliance with instructions as to wages or conditions of labor (Art. XII, p. 11) or other instructions of Owner (Art. XXVII, p. 24); (*e*) decrease if insurance dispensed with (Art. X, p. 10).

Fee, $36,000 (Art. II, p. 21). (*a*) If actual cost equals estimated cost. (Art. XX, p. 20). (Fee decreased from $37,500 to $36,000 on exercise of option, p. 21.)

(*b*) *Fee increased:* (1) If actual cost less than estimated, agent gets ⅓ of the saving. Owner and employees each ⅓. (Art. XX, p. 20.) (2) Premiums for early delivery not exceeding $11,000 per vessel. (Art. IV, p. 4.)

(*c*) *Fee decreased:* (1) If actual cost exceeds estimated, fee diminished by one-half of excess (Art. XX, p. 20). (2) Losses caused by neglect of agent's executives or managers (Art. XIX, p. 15). (3) Liquidated damages for delay (Art. IV, p. 4). (4) These three dedutions not to reduce average fee below $25,000 per vessel (Art. 21, p. 21; Art. 25, p. 24).

Plant: (*a*) To consist of buildings (including such housing, hospital, sanitation, recreation, commissary facilities, ways, etc., considered necessary for the Owner). (*b*) The real estate upon which the plant is to be erected belongs to city of Newark (p. 1). (1) Owner has option from city of Newark to purchase for $1,353,480. (2) Owner pays annual rent, gradually increasing from $32,560 to $71,410, the term of the lease being renewable to June, 1931 (see lease between city of Newark and Owner).

(*c*) All plant constructed belongs to Owner (Art. I, p. 2).

(*d*) Owner limits plant cost to $6,266,600.

Payments: (*a*) *Of fee.* $12,500 as each vessel half finished; $12,500 upon completion of satisfactory trial; remainder, if any, upon audit of actual cost of vessel. (Art. XX, pp. 17, 18.)

(*b*) *Of cost.* Owner from time to time provides funds to be deposited in trustee account withdrawn against checks countersigned by Owner's representatives (Art. XVII, p. 14). Agent gives surety company bond to secure proper application of funds (Art. XVII, pp. 14, 15). Some outside costs payable by Owner monthly 15 days after submission of certified bills. (Art. XVII, p. 15.)

Premiums and liquidated damages: $300 per day according as delivery is advanced or retarded beyond the dates scheduled (Art. IV, p. 4). Extensions of time granted because of conditions beyond control of agent extend the period for the computation of liquidated damages but (except where delay due to fitting up of wooden hulls) not for computation of premium unless Owner deems advisable. Premium or liquidated damages not to exceed $11,000 per vessel. (Art. IV, pp. 5, 6.)

Control over work, subcontracts, and conduct of agent: (*a*) Owner controls purchases and commitments. Contracts made in Owner's name. (Art. V, p. 6.)

(*b*) Owner's instructions as to wages and conditions of labor obeyed (Art. XII, p. 11).

(*c*) All directions, instructions, and decisions of Owner to be followed (Art. XXVII, p. 24).

(*d*) Agent to serve Owner's interests at all times (Art. XXVI, p. 24).

Option: (*a*) *On vessels.* Exercised as stated.

(*b*) *On plant.* (1) Owner has option to purchase real estate from city of Newark for $1,353,480, option to be exercised by December, 1922, or one year after the termination of the war, whichever is the later date. (2) If Owner does not exercise option to purchase real estate, city to have the right to purchase the improvements made by Owner at appraised valuation. (Lease, p. 5.) (3) If Owner does purchase real estate and desires to sell plant, city has option to repurchase real estate and plant, its right to repurchase expiring 50 years from date of option. (Option, 2d page.)

Termination: Owner has right to terminate if progress unsatisfactory, in which case it may take over plant and facilities, paying agent actual cost plus agent's fee which Owner decides has been justly earned. (Art. IX, pp. 9, 10.)

SCHEDULE OF DELIVERIES.

Number of vessels.	Keels laid during—	Launched during—	Delivered.	Total.
3	December, 1917..	February, 1918..	June 30, 1918	3
4	January, 1918...	March, 1918.....	....do.....	7
6	February, 1918..	April, 1918.....	July 31, 1918	13
10	March, 1918.....	May, 1918.....	Aug. 31, 1918	23
12	April, 1918.....	June, 1918.....	Sept. 30, 1918	35
14	May, 1918.....	July, 1918.....	Oct. 31, 1918	49
14	June, 1918.....	August, 1918....	Nov. 30, 1918	63
12	July, 1918.....	September, 1918.	Dec. 31, 1918	75
10	August, 1918....	October, 1918....	Jan. 31, 1919	85
10	September, 1918.	November, 1918.	Feb. 28, 1919	95
10	October, 1918....	December, 1918..	Mar. 31, 1919	105
10	November, 1918.	January, 1919...	Apr. 30, 1919	115
10	December, 1918..	February, 1919..	May 31, 1919	125
9	January, 1919...	March, 1919.....	June 30, 1919	134
8	February, 1919..	April, 1919.....	July 31, 1919	142
8	March, 1919.....	May, 1919.....	Aug. 31, 1919	150

[Contract No. 87 S. C. Hulls Nos. 597–636, Inc.]

CONTRACT FOR CONSTRUCTION OF STANDARD TYPE COMPLETE VESSELS. COST-PROFIT SHARING.

Contract made this 7th day of September, 1917, between the Merchant Shipbuilding Corporation, a corporation organized under the laws of the State of Delaware, party of the first part (herein called the Agent) and United States Shipping Board Emergency Fleet Corporation, a corporation organized under the laws of the District of Columbia (herein called the Owner), representing the United States of America, party of the second part.

Whereas the Agent owns the Steamer "CAPE MAY," and also certain tracts or parcels of land, with certain buildings and equipment thereon, situated in or near the Township of Bristol, County of Bucks, State of Pennsylvania, and more particularly set forth and described in deeds bearing date August 27th, 1917, and recorded in the office for Recording of Deeds, etc., in and for Bucks County, State of Pennsylvania, as follows, viz:

Deed from Bristol Realty Company, a Pennsylvania corporation, to the Agent (Merchant Shipbuilding Corporation), recorded on August 29th, 1917, in Deed Book 409, at page 164.

Two deeds from Carl W. Hamilton to the Agent (Merchant Shipbuilding Corporation), recorded on August 29th, 1917, in Deed Book 409, at page 169, and in Deed Book 413, at page 134, respectively.

Two deeds from Carl W. Hamilton to the Agent (Merchant Shipbuilding Corporation), recorded on August 30th, 1917, in Deed Book 412, at page 232, and in Deed Book 413, at page 144, respectively.

which steamer and parcels of land (including said buildings and equipment) are hereinafter called the "real estate"; and Whereas the Owner proposes to have constructed forty (40) cargo vessels of about nine thousand (9,000)

tons dead weight capacity, in accordance with certain plans and specifications; and Whereas the plans and specifications for said vessels, to be of uniform design, have been provided, adopted, and approved by the Owner.

Now, therefore, this contract witnesseth, that for and in consideration of the mutual agreements herein, the parties hereto covenant and agree to and with each other as follows:

I.

The Agent hereby agrees to construct and thereafter maintain during the continuance of this contract on the real estate such buildings (including such housing, hospital, sanitation, recreation, and commissary facilities as may be considered necessary by the Owner), building slips, plant and appurtenances, and to make such alterations in buildings and equipment already existing, as may be necessary for the establishment of a shipyard and for the construction of forty (40) vessels in accordance with the aforesaid plans. The arrangement of buildings, building slips, plant and appurtenances shall be in accordance with plans and schedules to be mutually agreed upon by the parties hereto, and the construction thereof shall be subject to the inspection of the Owner. The buildings, building slips, plant and appurtenances so constructed shall be and remain the property of the Owner. The shipyard thus constituted shall be employed exclusively during the life of the contract on vessels for the Owner, and the Agent shall undertake no work for other parties at the shipyard, except with the written approval of the General Manager of the Owner or except as hereinafter provided in Article XXI hereof.

II.

The Agent will as expeditiously as possible organize a force of workmen, superintendents, and the administration necessary to carry out to completion the building of the vessels herein contracted for.

III.

As soon as the shipbuilding plant and organization are sufficiently advanced the Agent shall proceed with the construction of forty (40) cargo vessels in accordance with the plans and specifications aforesaid, which are hereto attached and hereby made a part of this contract. The construction of said vessels (the word vessel as used throughout this contract being intended to include everything covered by the plans and specifications above referred to) shall conform in all respects to the aforesaid plans and specifications, including duly authorized changes therein. Said vessels shall be provided with fittings, equipment, machinery, devices and appliances, and appurtenances of every kind with latest improvements, complete in all respects and ready for service as provided for in the specifications, and shall be delivered to the Owner afloat at the shipyard at Bristol, Pennsylvania.

The Owner shall have the right, but only by orders in writing, to make such reasonable alterations, omissions, additions, or substitutions in the plans and specifications not materially affecting the general design of the vessels as the Owner may deem necesary. The Agent agrees to accede to and carry the same into effect as though such alterations, omissions, additions, or substitutions were originally provided for in this contract. If by reason thereof the actual cost of the construction hereunder shall be increased, then, the estimated basis cost shall be correspondingly increased. If the construction shall be rendered less expensive by reason thereof, the estimated basis cost shall be correspondingly decreased.

IV.

It is agreed by both parties that time is of the essence of this contract. The Agent agrees to begin and carry through to completion the work herein contracted for with dispatch. The vessels shall all be completed and ready for delivery to the Owner within eighteen (18) months from the date of this contract, but the Agent hereby agrees to use its best efforts and endeavors to complete said vessels and to have them ready for delivery to the owner in accordance with the following schedule, viz:

The first four vessels within 245 days; the second four within 280 days; the third four within 315 days; the fourth four within 350 days; the fifth four within 385 days; the sixth four within 420 days; the seventh four within 455

days; the eighth four within 490 days; the ninth four within 520 days; and the tenth and last four within 548 days from the date of this contract.

Should the Agent have completed and ready for delivery to the Owner any of said vessels before the times provided in the above schedule the owner agrees to pay as a premium for earlier delivery for each completed vessel so delivered the sum of Three hundred Dollars ($300) per day for each and every day gained by such early delivery. Should the Agent fail to have ready for delivery all of the vessels within eighteen (18) months from the date of this contract, the Agent agrees to pay to the Owner (as liquidated damages) on each vessel not completed and ready for delivery within said period of eighteen (18) months Three Hundred Dollars ($300) for each and every day of delay in delivery of such completed vessel, but it is hereby agreed that the total premium so to be paid for any such vessel shall in no case exceed the sum of Fifteen Thousand Dollars ($15,000); and that the total liquidated damages so to be paid for any such vessel shall in no case exceed the sum of Fifteen Thousand Dollars ($15,000) or be in excess of such sum as will reduce the net fee to be paid of the Agent for such vessel as hereinafter provided for below the average minimum fee mentioned in Article XXV hereof. Premiums or liquidated damages shall be added to or subtracted, so far as possible, from the final payment of the Agent's fee herein provided for.

If the Agent be delayed or obstructed in the performance or completion of the work provided for by this contract by the delay, neglect, or default of the Owner, or by reason of alterations or additions by the Owner, or the commandeering by the United States Government of materials on the ground or materials purchased or contracted for by the Agent or Owner but not delivered, or of facilities for the transportation of material and of laborers, or by reason of strikes, fire, lightning, earthquake, flood, riot, insurrection, or war, or by reason of suspension of deliveries of material or machinery for any of the causes above stated, or by any other cause beyond the control of the Agent so that the time of delivery of any of the vessels shall be delayed beyond the period of eighteen (18) months from the date of this contract, the time of delivery shall be extended for a period equivalent to the time lost by reason thereof; provided that no such extension of time shall be granted for any particular delay unless the Agent shall, within ten (10) days after the occurrence of such delay, notify the Owner in writing of its intention to claim such extension.

All extensions of time for the delivery of any of the vessels herein contracted for shall correspondingly postpone the date at which liquidated damages on account of delays in delivery shall begin to accrue, but premiums shall be paid only in the event of completion and delivery of the vessels within the times specified in the above schedule, and no extension of time for any cause whatever shall operate to entitle the Agent to premiums for early delivery, except that if the Agent shall establish to the satisfaction of the Owner that any delay has been caused solely because of changes ordered or instructions given by the Owner, or because of any default of the Owner, the Owner will consider extending the times within which premiums may be earned by the Agent, provided that, if the Agent shall establish to the satisfaction of the General Manager of the Owner that actual delay in the completion of any of the forty (40) vessels herein contracted for has been exclusively caused by the fitting out of wooden hulls as provided for in Article XXVIII, such delay will be regarded as extending by the length of such delay the time in which premiums on each vessel so delayed may be earned by the Agent.

V.

The Owner reserves the right to control through its duly authorized representative all orders for materials, machinery, equipment, supplies, and other purchases and commitments made under this agreement (including establishment of extensions, increases, and additions to plants and property), or in its own name to make any such order, purchase, or commitment, subject to advice to the Agent so as to avoid duplication. All contracts and orders placed by the Agent shall be in the name of the Owner by the Agent.

Such materials and parts to be used in the construction of the shipyard and of the vessels as are ordered by the Agent, shall be received and payment therefor made by the Agent, from the funds deposited by the Owner as provided for in Article XVII, direct to the individual, firm, or corporation with whom the order has been placed at the price stipulated in the order and in accordance with such terms of payment as may be arranged by the Agent with such individual, firm, or corporation. Any amounts paid for materials and parts to be

used in the original construction of the shipyard will enter into the cost of the shipyard. Any amounts paid for materials and parts to be used in the construction of the vessels will enter into the actual cost of the vessels, as hereinafter provided for.

Such materials and parts as are used in the construction of the vessels shall be of the quality and characteristics best adapted to the various purposes for which they may be used, in so far as they conform to the requirements and specifications of the American Bureau of Shipping and/or Lloyds. The Agent shall supply such assistance as may be required by surveyors of the American Bureau of Shipping and/or by inspectors of Lloyds and/or of the Owner in making any tests and inspections of such material and parts at the shipyard considered necessary by such inspectors or surveyors.

VI.

The workmanship on said vessels in detail and finish in all parts shall be first class, and of the very best quality usual in American seagoing vessels of this class, and shall at all times be subject to the inspection of the American Bureau of Shipping and/or Lloyds and of the Owner's inspectors as aforesaid, and the surveyors and inspectors may with the approval of the Owner or his duly authorized representative direct the replacement of any unfit workmanship or materials if below the standard of the American Bureau of Shipping and/or Lloyds for vessels of this class.

VII.

The vessels shall be inspected during the progress of the work by the surveyors of the American Bureau of Shipping, and/or by the inspectors of Lloyds, and the inspection certificate of the highest rating of these organizations for seagoing vessels must be obtained and furnished when the vessels are ready for delivery. Tonnage certificates in duplicate shall also be obtained from the Commissioner of Navigation and furnished at the time of delivery of the vessels to the Owner. All expenses of such inspection and certificates shall be considered as part of the actual cost of the vessel. In addition to the surveyors of the American Bureau of Shipping and/or inspectors of Lloyds the Owner will employ, at the Owner's expense, but not to be included in actual cost, one or more inspectors of recognized ability in their profession to supervise and assist in the construction of these vessels. They, and their assistants, described herein as the Owner's inspectors, will represent the Owner and will be required to watch closely the construction. Such one of them as shall from time to time be so designated by the Owner will act as representative of the Owner, and be designated as the District Officer, and to him shall be referred all questions arising under the contract at the shipyard. His decision on all important questions shall be in writing, and, when rendered under his general authority or after approval by the Owner, shall be binding, subject in all cases to appeal as provided in Article XXII hereof.

VIII.

When each vessel is substantially complete it shall be given a dock trial of not less than eight hours duration. Should any defects or deficiencies develop during such trial they shall be corrected by the Agent to the satisfaction of the Owner, and the dock trial repeated if considered necessary by the District Officer. The Owner may designate any ten (10) vessels as a group, and may select one (1) vessel from such group to be tried on a measured mile course in the vicinity of the shipyard, in addition to the dock trial, provided above, and its satisfactory performance as to speed and working of machinery shall be taken as representative of the speed and machinery performance of the ten (10) vessels. If the vessel selected shall not satisfactorily perform such test the Owner may direct that any or all vessels of the group be given speed and machinery tests, of a like character. The Agent agrees to take such additional steps as the Owner may require to increase the speed of any vessel up to the speed specified in the specifications. After the satisfactory completion of the trials and of all other work included in the plans, specifications and authorized changes, each vessel shall be delivered afloat to the representatives of the Owner at the shipyard, and shall thereupon be accepted, and the Owner shall take possession of the vessel and be responsible for the safety thereof. The Owner

shall remove such accepted vessel from the shipyard within such time as will prevent encumberance of the waterfront or interference with the work on other vessels.

In case of failure or omission of the Agent at any stage of the work prior to completion from any cause or causes within its control to go forward with the work and/or make progress toward its completion satisfactory to the Owner, the Owner may terminate this contract. In that event the Owner may immediately enter the shipyard and take possession of it, and of the vessels, materials and equipment, and also withdraw without the signature of the Agent any balance on hand in any Agent-Trustee account established under Article XVII hereof and shall assume all commitments properly chargeable to the work hereunder. The Owner shall thereupon cause to be taken and filed with the United States Shipping Board a full and complete statement and inventory of all work done or begun on or about the vessels and of all materials on hand and/or ordered or contracted for and applicable thereto, and a copy of such statement and inventory shall be furnished to the Agent. Concurrently with the making of such statement and inventory, the Owner may proceed with the construction of vessels, either at the shipyard with its equipment and facilities, or elsewhere, by contract or otherwise, and in its discretion use for this purpose all suitable materials on hand and included in the inventory. In case the Owner shall thus terminate this contract the total amount to be paid hereunder, including all payments theretofore made, shall be the actual cost (computed in the manner defined in Article XIX hereof) of all work done under this contract up to the time of termination, plus such part of the Agent's fees as the Owner may decide to have been justly earned, plus the rental for the "real estate," which, after said termination, is used by the Owner.

At the conclusion of such work as the Owner may decide to do at the shipyard after terminating this contract, the appraisal provided for in Article XXI shall be made and the options referred to in said article shall become operative.

PROVIDED, HOWEVER, That if within fifteen (15) days after written notice to the Agent by the Owner of the latter's intent to terminate this contract, the Agent can show to the satisfaction of the General Manager of the Owner reasonable industry and good faith in the prosecution of the work hereunder, and that the delays have been caused by circumstances over which it had no control, the Agent shall be allowed such opportunity as the General Manager of the Owner may deem reasonable to complete the work.

X.

The Agent agrees to procure, so far as procurable, and thereafter maintain such insurance, in such forms, on such property, to cover such contingencies, in such amounts, and for such periods as the Owner shall approve or require. The policies shall provide that the loss, if any, shall be payable to the Owner for the use of the Owner and/or the Agent, as their respective interests may appear. In the event that the Owner shall see fit to dispense with insurance, in whole or part, on its own property, the estimated basis cost, as set out in Article XX, shall be diminished by such a sum as the General Manager of the Owner deems fair and just. Should any vessel be constructively or actually a total loss, no additional vessel shall be built under this contract in order to replace it and to complete the forty (40) vessels herein provided for. The Owner shall pay, within thirty (30) days after such total loss, to the Agent, for its fee for work previously done on any vessel so lost such sum as the General Manager of the Owner may determine to be fair and just.

XI.

The Agent agrees to insure, to the satisfaction of the Owner, so far as insurance shall be procurable, against the liability of the Agent and/or the Owner for injuries to, or death of, employees, workmen, or the public or others, in or about the work covered by this contract. The Agent shall to the best of its ability protect the Owner against claims for any infringements of patents or patent rights and for the use of any patented articles embodied or to be embodied in the vessels, by suitable agreement satisfactory to the Owner as to the use of such patents or patent rights. The Owner will assume all costs, expenses, and damages which it or the Agent amy be obliged to pay to procure such agreements or to pay by reason of any infringements of patents or patent rights or the use of patented articles not covered by such agreements,

pursuant to a decree by a proper Court in any litigation involving the use of such patents, but the Agent shall assist the Owner at the latter's expense, save for services of the Agent's employees, in furnishing such evidence as to the use of the patents and other matters of fact as may be required by the Owner in such litigation. The Agent shall promptly notify the Owner in writing of any claims of infringement that may from time to time be brought to the Agent's attention.

XII.

The Agent will comply with all instructions not contrary to law as to wages or conditions of employment of labor on this contract given to it in writing by the Owner. If by reason of any such instruction the cost of any vessel hereunder shall be increased, then the estimated basis cost shall be correspondingly increased as provided in Article XX. The Owner, in its discretion, will give such assistance as shall be within its power in securing and retaining the labor necessary for the work under this contract. The Agent will promptly notify the Owner of any labor difficulties.

XIII.

The Agent shall provide the usual protection for the property of the Owner and of the Agent at the shipyard, and shall furnish such additional protection as the Owner may require; such additional protection, however, shall be paid for by the Owner, but shall not be included in the actual cost of the work to be done under this contract for the purpose of comparison with the estimated or revised estimated basis cost.

XIV.

The Owner will, in its discretion, use its influence and such powers as it may have by law to secure with the utmost practicable expedition and at the minimum cost consistent with the existing conditions, the facilities, utilities, parts, materials, and supplies required for the work under this contract, and will in its discretion also use its influence and powers to secure rapid and/or preferential transportation from any and all railroad companies and public-service companies for workmen, employees, materials, parts, and supplies required for the work.

XV.

It is agreed that the title to all vessels, either completed or under construction, in so far as they shall have been inspected and approved by the Owner, shall be in the United States of America and that the title to all material for the furtherance of work under this contract however and by whomsoever contracted for or assembled or set up in the shipyard or used in the construction of work under this contract, shall be in the Owner at all times. Nothing contained herein, however, shall be construed as a waiver by the Owner of its right to direct the replacement of unsatisfactory workmanship and/or materials.

No inspector's certificate given or payment made under the terms of this contract (except on final payment) shall be conclusive evidence of the performance of this contract, either in whole or in part, and no payment shall be construed to be a waiver of the right of the Owner to direct the replacement of unsatisfactory workmanship and/or materials.

XVI.

The Agent will keep the vessels in the course of construction free and clear from all claims, liens, or encumbrances of any kind or description (except liens or encumbrances accruing through the default of the Owner, and/or for the existence of which the Owner shall be responsible and except claims and liens of the Agent), and shall, before delivery of each vessel, show to the satisfaction of the Owner that such vessel is free and clear from any claims, liens, and encumbrances, except as aforesaid. The Agent agrees that it will, to the extent that funds are available under the terms of Article XVII, promptly pay for all labor, material, or other service rendered to it in connection with the work under this contract.

XVII.

The total actual cost (as defined in Article XIX) of constructing said buildings, building slips, plant, and appurtenances and alterations provided for in Article I hereof, and the total actual cost of constructing the vessels herein contracted for, shall be paid by the Owner to the Agent as follows:

In order to provide the cash funds necessary for carrying on the work under this contract, the Owner will from time to time deposit in advance to the credit of the Agent as Trustee for the purposes of this contract, in such bank or banks as may be agreed upon, such sums as may be necessary to constitute and to keep constituted a fund from which to finance the work, to provide for payments to be made for the buildings, building slips, plant, and appurtenances to be erected and installed and/or altered on the real estate, for materials, and for wages and salaries at the shipyard. Such sums shall be drawn upon only by checks countersigned by the District Officer or the Owner's representative for payments to be made by the Agent under this contract and each payment shall be charged against the buildings, building slips, plant, and appurtenances, the property of the Owner, or the alterations provided for in Article I, or as a payment on account of the cost of the vessel as the case may be. Any interest paid by the bank or banks on such deposits is the property of the Owner, and upon the final completion of this contract the Owner may withdraw without the signature of the Agent any balance on hand in any Agent-Trustee account established under this Article.

The Agent shall file with the Owner an indemnity bond, secured by a first mortgage on the real estate the property of the Agent at Bristol, Pennsylvania, which shall secure to the Owner the proper application of all funds placed to the credit of the Agent as aforesaid.

Within sixty (60) days after the completion of this contract and the acceptance by the Owner of all the vessels to be constructed hereunder, or within sixty (60) days after the termination by the Owner of this contract of such termination shall be declared under Article IX of this contract, and after the settlement and payment of any indemnity payable to the Owner on account of the misapplication of the funds aforesaid, should such misapplication occur, the Owner agrees to consent in writing to the satisfaction and discharge of record of said bond and mortgage.

For other items of actual cost, including those incurred in outside offices, chargeable to the work under this contract but not paid from the aforesaid funds, and the rental for the "real estate," payment shall be made to the Agent by the Owner monthly within fifteen (15) days after the submission of bills covering such actual costs, certified to by the District Officer. The Agent's fee shall be payable at the times and in the manner specified hereinafter.

XVIII.

The Agent shall establish and keep suitable accounts and records, which shall show the actual cost of all the work under this contract. The preservation of said accounts and records for a reasonable time shall be provided for by agreement of the parties at the termination of this contract.

The accounts and records of the Agent shall at all reasonable times be open to inspection by the Owner. All statements and accounts relating to expenditures and cost hereunder shall be made by the Agent in such form and supported by such original papers as may be required by the General Manager of the Owner. The methods and principles of keeping costs shall be adequate for the determination of actual costs. All information obtained from the accounts and records shall be treated as confidential.

The Owner may send Auditors to the shipyard and to the Agent's offices to supervise and assist in the accounting.

The actual cost of constructing the buildings, building slips, plant, and appurtenances and of alterations and additions thereto, together with the cost of any alterations made to the buildings or other parts of the "real estate" shall be computed in the manner defined in Article XIX hereof and shall be kept in a separate detailed plant cost account and inventory. A separate detailed inventory without values as of the date of this contract of the buildings and equipment, included in the "real estate," the property of the Agent, shall be prepared as soon as practicable after the execution of this contract. The various parts of the machinery, plant, and appurtenances shall be so marked as to be readily identifiable at any time in the inventories and as to whether they form part of

the "real estate" as defined in the preamble to this contract or of the buildings, building slips, plant, and appurtenances the property of the Owner, as specified in Aricle I of this contract.

The actual cost of the forty (40) vessels herein contracted for shall also be computed in the manner defined in Article XIX hereof and shall be kept in such manner and segregated into such items as may be necessary for the purposes of this contract and as may be agreed upon, and particularly as may be necessary for the ascertainment of the Agent's fee on each vessel hereinafter provided for.

XIX

For the purposes of this contract actual cost whether of the construction of the shipyard or of the construction of vessels (the latter to include the maintenance and operation of the shipyard in its entirety) is defined as follows:

1. The net costs, after deducting all discounts obtained, of supplies, materials, machinery, tools, equipment, and parts thereof directly entering into or expended in the execution of the work, including freight and other transportation costs of material, and of the other items in this paragraph enumeraed.

2. Costs of direct labor employed in the execution of the work.

3. Overhead expenses. These shall be taken to include indirect labor and materials and the general and administrative expenses and other expenses applicable to and necessary in connection with the execution of the work herein contracted for (including in actual cost the maintenance, operation, and repair of buildings, building slips, plant, and appurtenances.)

Specifically the overhead expense shall include the following:

(a) All items of everhead expense contained in the schedule of the estimated basis cost annexed to and forming part of this contract, with such modifications as may be mutually agreed upon but in accordance with the general principles laid down in this Paragraph 3.

(b) The rent of the real estate during such period as it may be used in the execution of the work hereunder, which shall be at the rate of one hundred eleven thousand six hundred thirty ($111,630) dollars per year, such sum being six per cent (6%) of the actual cost to the Agent of the acquisition of the real estate.

(c) Taxes and assments of every kind (except for permanent improvements) imposed on the real estate, buildings, building slips, plant, and appurtenances constituting the shipyard or arising from any of the operations included in the work to be done under this contract, including license fees, but excluding all Federal taxes, which latter shall be borne by the Agent without reimbursement.

(d) Subject to the rules hereinafer stated, transportation of laborers and/or employees, salaries and expenses of the Agent's general manager, purchasing and traffic agencies, engineering and drafting forces and accounting and clerical forces employed and maintained by the Agent at the shipyard exclusively on the work hereunder, and an equitable proportion of salaries and expenses of other similar agencies and forces employed and maintained by the Agent at the shipyard and/or elsewhere for the purpose of and/or in connection with the carrying on of the work to be performed under this contract; but the Agent's fee herein provided for shall cover the services of its Executive Officers, who for the purposes of this contract shall be deemed to include its President, its Board of Directors, Vice Presients, Treasurer, and Secretary, and their respective assistants not immediately attached to the shipyard, and their salaries and emoluments shall not be chargeable to the work under this contract.

(e) The cost of casualty and liability insurance and the cost of such bonds, fire and other insurance as the Owner may approve or require; all losses due to accidents or casualties not compensated by insurance or otherwise and legal and other expenses in connection therewith sustained or incurred by the Agent, including the cost of settlements made with the approval of the Owner, and the cost of the removal and replacement of defective or unsaisfactory workmanship or materials, but, if any such losses and expenses and/or necessity for any such replacement shall be caused by the fault or neglect of the Agent's executive officers, managerial and superintending employees, foremen and leading men, there shall be deducted from the Agent's fee such part of such losses and/or cost of such replacement as, together with deductions under Articles IV and XX, shall not result in an aggregate average deduction from such fee of more fifteen thousand dollars ($15,000) for each vessel or reduce the Agent's average fee for vessels constructed hereunder below the minimum fee provided for in Article XXV hereof.

The following rules are hereby mutually agreed to and shall be followed with reference to actual cost:

Excessive and unusual salaries or emoluments shall not be paid by the Agent or charged as a part of the actual cost.

The rent of the "real estate" being allowed for in actual cost, no depreciation or appreciation of its value shall be allowed as part of the cost.

The overhead charges incurred in the work under this contract shall be equitably prorated between and charged to the actual cost of the shipyard and the actual cost of the vessels, as the case may be.

The buildings, building slips, plant, and appurtenances being the property of the Owner, no charge on account of their use by the Agent shall be made nor shall any charge for depreciation of such buildings, building slips, plant, and appurtenances be allowed as part of the cost to the Agent, but such repairs, renewals, and upkeep to the buildings, building slips, plant, and appurtenances as may be necessary during the life of this contract shall be considered as part of the overhead expense on the vessels as aforesaid.

All materials and supplies purchased for but not used in the construction of the vessels herein contracted for shall be and remain the property of the Owner, and the value thereof shall be credited on the cost of the vessels. The salvage value of scrap, waste, containers, etc., originally purchased for the shipyard and/or vessels and disposed of during the life of the contract shall be credited to the cost of the shipyard and/or of the vessels, as the case may be.

All revenue, if any, from the operations of the camp, commissary, hospital, and other facilities, or from rebates, refunds, etc., shall be accounted for by the Agent to the Owner and applied in reduction of the cost of the vessels or of the buildings, building slips, plant, and appurtenances, as the case may be.

XX.

The amount of the fee to be paid the Agent for services (exclusive of the rental value of the "real estate" hereinbefore specified and subject to additions or subtractions as provided in this contract) is based upon a schedule of the estimated basis cost of each of the said forty (40) vessels to be constructed under this contract, which is hereto annexed and forms part of this contract.

Such estimated basis cost is One Million Three Hundred and Five Thousand Four Hundred and Eight Dollars ($1,305,408) as set forth in detail in said schedule containing the estimated costs of labor, of materials, and of overhead expense. Should the actual cost of materials and/or the rates of wages paid be different from those set forth in the aforesaid schedule, the estimated total material basis cost shall be increased or diminished by the actual amount of the change in cost of the materials, and the estimated total labor basis cost shall be increased or diminished in the *ratio* that the rates of wages actually paid bear to the original schedule rates of labor. The estimated basis cost shall also be revised on account of any changes ordered as provided in Articles III and XII. Should such revisions be made the new estimated cost shall be considered as the revised estimated basis cost. Should the actual cost as ascertained by audit of the books and accounts of the Agent be equal to the revised estimated basis cost, the aforesaid fee payable to the Agent, shall be sixty-four Thousand Dollars ($64,000) on each of said forty (40) completed vessels subject to additions and subtractions as elsewhere provided in this contract. Should the actual cost upon audit be less than the revised estimated basis cost, such saving shall be divided into three equal parts, one of which shall accrue to the Agent, one to the Owner, and the third shall be distributed in such manner as may be directed by the Owner, with a view to recognizing faithful and efficient performance of duty on the part of workmen and employees. Should the actual cost as ascertained by the aforesaid audit be greater than the revised estimated basis cost, one-half of such increase shall be deducted from the Agent's fee aforesaid, and the remainder shall be borne by the Owner; PROVIDED, that in no case shall the Agent's average fee for each of said forty (40) completed vessels, after making all deductions and/or additions provided for in any article hereof, be less than Fifty Thousand Dollars ($50,000). Said fee on each vessel shall be payable to the Agent as follows, viz: Twenty-five Thousand Dollars ($25,000) when the vessel is half finished as certified to by the District Officer, or otherwise evidenced to the satisfaction of the General Manager of the Owner; Twenty-five Thousand Dollars

($25,000) upon the completion of satisfactory trials, and the remainder, if any, upon audit of the actual cost of the vessel as above provided for.

XXI.

At any time before the time hereinafter fixed for appraisal, it shall be optional with the Owner to order additional vessels of the same or of a different type to be built at the shipyard. Should the Owner order such additional vessels, the shipyard shall be used, and the actual cost of the vessels be paid for in the manner herein provided for the forty (40) vessels under this contract. Such additional vessels shall be constructed in accordance with the terms and provisions of this contract except that the amount of the Agent's fee for such additional vessels, the plans and specifications therefor, the estimated basis cost thereof, and the times for the completion and readiness for delivery thereof, shall be the subject of mutual agreement, and except, also, that the amount of the Agent's fee for each such additional vessel shall in no case be greater, for the same size and type of vessel, than that herein provided for.

At least thirty (30) days prior to each time when any building slip is expected by the Agent to be available and no longer needed in connection with the construction of any of the original forty (40) vessels, or of any additional vessels which the Owner may have theretofore ordered, the Agent shall notify the Owner in writing of that fact. Within fifteen (15) days after the receipt of each such notice, the Owner shall notify the Agent in writing whether it desires any additional vessels, and the number of vessels, if any, which it desires to have built. If the Owner shall notify the Agent that it does not desire any additional vessels, or if the Owner shall fail to give the Agent any such notice, then the right of the Owner to order any additional vessels thereafter shall cease unless the Owner shall be of the opinion, and shall so notify the Agent in writing, that a National emergency exists, in which event the Owner may, by written notice to the Agent, extend from time to time the time within which the Owner may order additional vessels. If, however, the Owner shall notify the Agent that it does not desire any additional vessels, or if the Owner shall fail to so notify the Agent and shall also fail to notify the Agent of the existence, in the opinion of the Owner, of a National Emergency, and of the Owner's election, by reason thereof, to extend the time within which it may order additional vessels, then, and in either of said events, one appraiser shall within five (5) days be appointed by the Owner, one within five (5) days by the Agent, and the third promptly by the two first so chosen. If either party shall fail to appoint an appraiser within said five (5) days, the other party may select a second appraiser, and the two so selected shall choose a third as aforesaid. The three appraisers so appointed shall appraise the then value of the buildings, building ships, plant, and appurtenances, the property of the Owner as shown by the detailed plant cost account and inventory kept by the Agent as herein provided for in Article XVIII, and also of parts, materials, supplies, and scrap purchased for the work on the vessels, but not incorporated or to be incorporated in them on completion, or otherwise disposed of under this contract.

The appraisers shall take into consideration the actual costs as shown by the inventory which shall be furnished them, the conditions regarding wear and tear and depreciation, the desirability of the buildings, building slips, plant, and appurtenances for the purposes of a shipyard, their replacement value at market prices at the time of the appraisal, and the condition of the shipbuilding business generally with reference to the going value of a constituted shipyard at the time of the appraisal. The appraisers shall complete their appraisal and deliver one copy thereof to the Owner and one to the Agent within thirty (30) days after their appointment.

Within fifteen (15) days from the receipt of said appraisal the Owner shall notify the Agent in writing whether it elects to purchase for cash the "real estate" of the Agent, as defined and described in the preamble to this contract, at the original cost of its acquisition by the Agent, viz, one million eight hundred sixty thousand five hundred dollars ($1,860,500) plus all assessments and taxes paid by the Agent for permanent improvements made during the term of this contract. If the Owner elects to purchase said "real estate," the Agent shall convey the same to the Owner by good and sufficient warranty deed, and the Owner shall pay therefor, in cash, within thirty (30) days after the completion and acceptance of the last of the vessels ordered hereunder.

Should the Owner notify the Agent that it elects not to purchase said "real estate," or fail to so notify the Agent of its election, then the Agent within

fifteen (15) days thereafter shall notify the Owner in writing whether it elects to purchase, for cash, the buildings, building slips, plant, and appurtenances the property of the Owner, together with the parts, materials, supplies, and scrap, at the value thereof, as fixed by said appraisal.

Should the Agent elect to purchase the aforesaid buildings, building slips, plant, and appurtenances, together with the parts, materials, supplies, and scrap, at the appraised value thereof, said property shall be conveyed by the Owner to the Agent, and the purchase price therefor paid, in cash, by the Agent to the Owner within thirty (30) days after the completion and acceptance of the last of the vessels ordered hereunder; and the Agent, upon and after the date on which it notifies the Owner of its election to purchase, shall have the right to use the free portions of the shipyard for the construction of vessels for third persons. From and after the date when the construction of any vessel shall be begun by the Agent for others than the Owner, the six per cent (6%) rental to be paid by the Owner, as provided in Article XIX hereof, shall from time to time be reduced by the proportion that the direct labor cost of the work done by the Agent for others than the Owner bears to total direct labor cost of all work being done by the Agent at the shipyard, and the overhead expense, as defined in Article XIX hereof, shall likewise thereafter from time to time be apportioned upon the basis of the direct labor cost of work being done by the Agent for others than the Owner and for the Owner, respectively; and the Agent shall, from and after the date when it begins to use any part of the shipyard for others than the Owner and up to the completion of the last vessel constructed for the Owner hereunder, pay rental monthly to the Owner at the rate of six (6) per cent per annum upon such proportion of the appraised value of the buildings, building slips, plant, and appurtenances, the property of the Owner, as the direct labor cost of work being done by the Agent from time to time for others than the Owner bears to the total direct labor cost of all work being done by the Agent at the shipyard.

Should neither the Owner nor the Agent exercise their respective options to purchase the property of the other, or should either the Owner or the Agent elect to purchase the property of the other, but fail to pay the purchase price therefor within said period of thirty (30) days from and after the date of the completion and acceptance of the last of the vessels ordered hereunder, or as soon after such period of thirty (30) days as the deed herein provided shall have been tendered, then, and in either of said events, the Owner shall forthwith remove from the real estate all of the buildings, building slips, plant, appurtenances, and parts, materials, supplies, and scrap the property of the Owner and readily removable, and thereupon the Owner shall have no further title to or interest in said "real estate" belonging to the Agent or to or in said shipyard.

XXII.

In case the parties fail to agree as to any matter connected with this contract, or any doubt or dispute arises as to the meaning, construction, or effect of this contract or of any of the provisions or covenants hereof, or of the plans and specifications which are a part hereof, or as to the manner of doing the work provided for hereunder, or as to the materials used or to be used, or the time to be allowed or the amounts to be paid or allowed for alterations, omissions, additions, or substitutions, or as to any other particular, the matter shall be promptly referred to and determined by the General Manager of the Owner, and his decision in writing shall be final and binding upon the parties, except as hereinafter provided.

In case after delivery of a completed vessel to the Owner under this contract (but only in that event), the Agent shall deem that it is aggrieved by any decision of the General Manager as to any disputed matter hereunder of any kind regarding such vessel and shall give written notice to the Owner to that effect within thirty (30) days after delivery of such vessel to, or after final payment for such vessel by the Owner, and, or in case after completion of all work of constructing or altering the shipyard (but only in that event), the Agent shall deem that it is aggrieved by any decision of the General Manager as to any disputed matter hereunder of any kind regarding such construction and shall give written notice to the Owner to that effect within thirty (30) days after completion of all such construction, such matter shall be determined by a Board, which shall consist of three disinterested naval architects or engineers or experts, to be appointed, one by the Owner, one by the Agent, and the third by the two so appointed. Such Board shall within thirty (30) days

after submission of such matter to it make its determination, and its finding (made by a majority of the Board) shall be conclusive on both parties. Provided, however, that, if the Agent fails to notify the Owner in writing of its intent to subsequently appeal any decision of the General Manager, adverse to it, within ten (10) days after written notice of such adverse decision, the decision of the General Manager shall become final and binding upon both parties without appeal to the Board herein provided for. The cost of such arbitration shall be borne equally by the Owner and by the Agent.

XXIII.

This contract shall not, nor shall any interest herein, be transferred by the Agent to any other person or persons save with the consent of the Owner in writing.

XXIV.

All notices in writing from the Agent to the Owner shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to the United States Shipping Board Emergency Fleet Corporation at Washington, D. C., or be delivered personally to an executive officer or the District Officer of the Owner.

All notices in writing from the Owner to the Agent shall be sent by registered mail or by prepaid telegram (confirmed by mail) addressed to Merchant Shipbuilding Corporation, at 165 Broadway, New York City, or be delivered personally to an executive officer of the Agent.

Payments hereunder required to be made direct to the Agent shall be made by the Owner by check addressed to the Agent by mail at 165 Broadway, New York City.

XXV.

It is the intention of this contract that, notwithstanding any other provision thereof, the Agent's fee shall average not less than Fifty Thousand Dollars ($50,000) for each vessel completed and accepted, but this shall apply only to the forty (40) vessels first provided for.

XXVI.

The Agent, in all its acts hereunder, shall use its best efforts to protect and subserve the interests of the Owner. The Agent hereby agrees that it will procure all necessary permits and licenses and obey and abide by all laws, regulations, ordinances, and other rules applying to such work of the United States of America, of the State or Territory wherein such work is done, of any subdivision thereof, or of any duly constituted public authority.

XXVII.

The Agent shall, in the performance of its agreements hereunder, comply with and be bound by all directions, instructions, and decisions of the Owner or its authorized representatives; and compliance by the Agent with any such direction, instruction, or decision shall be a justification and protection to the Agent for any action so taken.

XXVIII.

The Owner may, when the construction of vessels hereunder will not thereby be materially delayed, bring to the shipyard wooden hulls for the purpose of installing machinery therein and equipping them ready for use. The Owner may, at its option, do such work itself or may, upon terms to be mutually agreed upon, require the Agent to do it.

XXIX.

No Member of, or Delegate to, Congress, or Resident Commissioner is or shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom, but this Article shall not apply to this contract so far as it may be within the operation or exception of Section 116 of the Act of Congress approved March 4, 1909 (35 Stats., 1109).

XXX.

This contract is executed and delivered upon the understanding that, if desired by the United States Shipping Board Emergency Fleet Corporation, a provision, satisfactory in form and terms to the United States Shipping Board Emergency Fleet Corporation, restricting the hours of labor of laborers and mechanics employed by the Agent or by subcontractors and providing for the payment of extra compensation for overtime work, will be inserted in the contract, with the same force and effect as if inserted in the contract before the execution and delivery thereof.

In witness whereof the parties have caused these presents to be executed by their proper corporate officers and their corporate seals to be hereto affixed and attached on the day above stated.

[SEAL.] MERCHANT SHIPBUILDING CORPORATION,
By R. H. M. ROBINSON, *President.*

Attest:

W. M. SIMPSON, *Secretary.*

Countersigned:

W. A. HARRIMAN, *Director.*

[SEAL.] UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
By EDWARD N. HURLEY, *President.*

Attest:

LESTER SISLER, *Secretary.*

O. K. W. L. C.

Statement of estimated basis cost per vessel as agreed upon for contract with Merchant Shipbuilding Corporation for 40 vessels.

Materials (detailed priced schedule supporting this figure attached)	$723,398
Labor (rates of pay on which labor cost is calculated attached)	291,005
Overhead expense (list items covered in overhead attached)	291,005
	1,305,408

ITEMS INCLUDED IN OVERHEAD.

Administration salaries and expense.
Clerical and office salaries.
Supervision of productive work.
Technical supervision.
Technical and shop inspection.
Inspection and certifiactes of registration societies.
Insurance, fire, accident, marine, liability, compensation, etc.
Protection, guards, etc.
Accounting.
Cost accounting.
Experimental work.
Expense of obtaining employees.
Welfare.
Office rent and supplies.
Traveling expense.
Postage, telephone, and telegraph.
Legal expense.
Subscription to technical publications.
Royalties and patent rights.
Taxes.
Rental of real estate and offices.
Purchase expense.
Templets.
Stores charges.
Laying out.
Drafting and listing.
Traffic chasing and routing.
Freight, expressage, and demurrage.
Light, heat, water, and power.
Temporary light and wiring (not directly chargeable).
Yard and shop service.

Clearing and care of yard and shop.
Tests.
General supplies for yard and shop.
Repairs, maintenance, and renewals to plant.
Small and loose tool equipment charges.
Pattern lumber.
Miscellaneous items as may be mutually agreed upon.
All other items of expense not a direct charge to material or labor cost of the vessels or to the original cost of the shipyard plant.

NOTE.—Overhead for accounting purposes may be divided into shop, indirect, and general overhead.

AVERAGE RATES FOR LABOR, DAY AND HOUR WORKERS, USED AS A BASIS OF LABOR COST.

Shop:	Per hour.
Carpenters	$0.40
Joiner	.53
Paint	.35
Rivet	.35
Chippers and caulkers	.43
Machine	.34
Pipe	.36
Furnace	.35
Blacksmith	.34
Ship fitters	.36
Erection	.36
Bolter's	.33
Power house	.33
Miscellaneous clerks, chauffeurs, etc	.30
Cleaner	.30
Labor	.25

Shop—Continued.	Per hour.
Hull labor	$0.30
Reamers and drillers	.32
Electrical	.34
Watchman	.25
Rigger	.32
Light sheet metal	.37
Plate and angle	.30
Mold loft	.53
Cranes	.36
Powerman	.30
Pieceworkers:	
Riveters	.52
Chippers and caulkers	.75
Blacksmiths	.42
Ship fitters	.50
Reamers and drillers	.50

[Contract 87 S. C., Sept. 7, 1917.]

NOTE.—"Owner"—Emergency Fleet Corp. "Agent"—Merchant Corp.

MERCHANT SHIPBUILDING CORPORATION.

DELAWARE CORPORATION, BRISTOL, PA.

Work to be done.—(*a*) 40 cargo vessels (Art. III); 9,000 tons d. w. c. Owner's plans and specifications (p. 1). (Owner has option to increase number, Art. XXI). Agent to construct plants and organize necessary force (Arts. I and II).

(*b*) Owner may use plant to install machinery in wood hulls or require agent to do so at terms to be fixed (Art. XXVIII).

Deliveries.—Afloat shipyard Bristol, Pa. (Art III), after dock trial and, if desired, a sea trial for one of each 10 vessels (Art. VIII). All to be completed within 18 months (Art. IV). Agent to use best efforts to complete and deliver as follows: First four, May 10; second four, June 14; third four, July 19; fourth four, August 23; fifth four, September 27; sixth four, November 1; seventh four, December 6, 1918; eighth four, January 10; ninth four, February 9; tenth four, March 9, 1919 (Art. IV).

Purchase price.—Owner pays (*a*) cost of plant (not including real estate), (*b*) cost of vessels (Art. XVII), (*c*) Agent's fee (Art. XX).

Actual cost.—Cost is defined (Art. XIX), including direct labor, materials, and overhead.

(*a*) Plant cost is separated from vessel cost (Art. XVIII, p. 13) and overhead is prorated between them (Art. XIX, p. 16).

(*b*) Cost of vessels includes rent of real estate (p. 14, b), maintenance, and operation of shipyards (p. 14, top).

(*c*) No charge for executive salaries of agent (p. 15, top); if part of agent's force on other work, overhead prorated (p. 15, top).

(*d*) Federal taxes borne by agent (p. 14, c).

Extra charges (borne by owner, but not included in actual or estimated cost): (1) additional protection to plant (Art. XIII), (2) owner's inspectors (Art. VII, p. 7).

Estimated cost of vessel.—$1,345,408 per vessel (not including extra charges). Subject to increase or decrease, as follows:

(*a*) Wages varying from schedule.

(*b*) Cost of materials varying from schedule (p. 17, top).

(*c*) Charges due to alterations (Art. III, p. 3).

(*d*) Compliance with instructions as to wages or conditions of labor (Art. XII, p. 10).

(*e*) Decrease of insurance dispensed with (Art. X, p. 9).

Fee.—(*a*) $64,000 per vessel, if actual cost equals estimated cost.

(*b*) *Fee increased.*—(1) If actual cost less than estimated, agent gets ½ of savings. Owner and employees each ½ (Art. XX, p. 17). (2) Premiums for early delivery not exceeding $15,000 per vessel (Art. IV, p. 3).

(*c*) *Fee decreased.*—(1) If actual cost exceeds estimated, agent's fee diminished by ½ of excess (Art. XX, p. 17). (2) Losses caused by neglect of agent's executives or managers (Art. XIX (a), p. 15). (3) Liquidated damages for delay not exceeding $15,000 per vessel (Art. IV, p. 3). (4) These three deductions not to reduce average fee below $50,000 per vessel (Art. XX, p. 17; Art. XXV).

Plant.—(*a*) To consist of buildings (including housing, hospital, sanitation, recreation, and commissary facilities, ways, etc., considered necessary by the owner.

(*b*) Agent owns real estate (including some buildings) (p. 1).

(1) Owner has option to purchase at cost, $1,860,500 (Art. XXI, p. 19).

(2) Owner pays annual rent, $111,630 (6% of cost) (Art. XIX, p. 14).

(*c*) All plants constructed belongs to owner (Art. I, p. 2).

(*d*) Owner limits plant cost to $7,542,304.

Payments.—(*a*) *Of fee.* $25.000 as each vessel half finished; $25,000 upon completion of satisfactory trial. Remainder, if any, upon audit of actual cost of vessel (Art. XX, p. 17, bottom).

(*b*) *Of cost.* Owner from time to time provides funds to be deposited in trustee account withdrawn against checks countersigned by Owner's representatives. Agent gives bond (secured by first mortgage on plant) to insure proper application of funds (Art. XVII, pp. 11, 12). Rent of real estate and some outside costs paid by Owner monthly, 15 days after submission of certified bills.

Premiums and liquidated damages.—$300 per day accordingly as delivery is advanced before the dates specified or retarded beyond the 18 months. Extensions of time granted because of conditions beyond control of agent extend the period for the computation of liquidated damages but (except where delay due to the fitting out of wooden hulls) not for the computation of bonus unless Owner deems advisable. Bonus or liquidated damages not to exceed $15,000 per vessel (Art. IV, pp. 3, 4).

Control over work, Labor, subcontracts, and conduct of agent.—(*a*) Owner controls purchases and commitments, contracts made in Owner's name (Art. V, p. 5).

(*b*) Owner's instructions as to wages and conditions of labor obeyed (Art. XII, p. 10).

(*c*) All directions, instructions, and decisions of Owner to be followed (Art. XXVII).

(*d*) Agent to subserve interest of Owner at all times (Art. XXVI, p. 23).

Option.—(*a*) *Additional vessels.* Owner may order additional vessels, the fee for which shall be no greater for the same size and type vessel than that specified (Art. XXI, top page 18). Option to be exercised about the time when building slips are expected to be vacant and not needed for construction of the 40 vessels (p. 18).

(*b*) *On plant.* (1) Owner has option to purchase the real estate for its cost, $1,860,500, plus assessments and taxes paid by agent (p. 19). This option is to be exercised after an appraisal of the buildings, etc., constructed by Owner, which appraisal is to be made about the time that the slips are beginning to be clear of vessels contracted for (p. 19, bottom). (2) If Owner does not purchase, agent has option to purchase the buildings, etc., constructed, at appraised value (p. 20, top). (3) If neither agent nor Owner exercises option, Owner may remove property (p. 21, top).

Termination.—Owner has right to terminate if progress unsatisfactory, in which case it may take over plant and facilities, paying agent actual cost plus agent's fee which Owner decides has been earned plus future rental (Art. IX, p. 8).

The CHAIRMAN. The committee agreed yesterday to hear Col. L. P. Featherstone, of Beaumont, Tex., on certain matters that he desires to submit to the committee. The most of the members of the committee, I presume, have seen a statement prepared by him as president of the Texas Steel Co.; but he may wish to add something to that statement, in order to enlighten the committee fully as to his proposition.

Col. Featherstone, will you give your full name and place of residence?

STATEMENT OF MR. L. P. FEATHERSTONE, PRESIDENT TEXAS STEEL CO., BEAUMONT, TEX.

Mr. FEATHERSTONE. My name is L. P. Featherstone; residence, Beaumont, Tex.

The CHAIRMAN. What is your occupation or profession?

Mr. FEATHERSTONE. Well, Mr. Chairman, we have been building and operating railroads for the past 25 years.

The CHAIRMAN. You are the president of the Texas Steel Co.?

Mr. FEATHERSTONE. The Texas Steel Co.; yes, sir.

The CHAIRMAN. That is a corporation organized under the laws of Texas?

Mr. FEATHERSTONE. Texas; yes, sir.

The CHAIRMAN. How long has it been in existence?

Mr. FEATHERSTONE. It has been incorporated about two years.

The CHAIRMAN. And what is its business, chiefly?

Mr. FEATHERSTONE. Its business is to acquire raw materials for steel making and to manufacture iron and steel.

The CHAIRMAN. It has never engaged in the building of ships, has it?

Mr. FEATHERSTONE. No, sir.

The CHAIRMAN. You may now proceed with your statement in your own way.

Mr. FEATHERSTONE. I would like to say, in a preliminary way, or, rather, in answer to some charges that have been made against us to the effect that ours was a concern that had no material except some options on what was understood to be inferior ore.

That statement came, as I understand it, from Admiral Bowles, and we felt it necessary in order to correct that statement to state just what we did have.

We have for the past eight years been engaged in getting together the iron ores of Texas, the limestone of Texas, and the coking coal of Alabama for the purpose of producing steel. We had just about accomplished that purpose in 1916; we owned—the two companies—about 30,000 acres of ore land, estimated to contain from 60,000,000 to 100,000,000 tons of high-grade iron ore. That land was bought and paid for, and has no debt against it. At one time one of our companies issued bonds for $200,000, but those bonds have never been out of the treasury of the company.

We own in Alabama between 5,000 and 6,000 acres of coal land estimated to contain something over 50,000,000 tons of coal. In conjunction with some limestone quarry people, we are in control of about 30,000,000 tons of high-grade limestone.

These are the constituent elements for the production of iron and steel.

We were just commencing to arrange for the erection of a 300-ton blast furnace and a 200-ton pipe plant, when war was declared.

We saw the prices to which iron and steel had gone, and while we were not ready to produce steel, we knew that the prices were easily three times above the reasonable cost of production, with a fair profit; and it was stated that J. P. Morgan & Co. had been able—this was probably in May or in June—to buy considerable tonnage of steel for our allies—the English and the French—at $120 a ton.

Soon after that, it was said that it was likely that the Government, on account of its enormous requirements, would be able to get its steel for $96 a ton. We thought the war a serious thing——

Senator HARDING (interposing). Well, Col. Featherstone, in passing let me ask this: You know that the Government gets steel for less than that, do you not?

Mr. FEATHERSTONE. Yes, sir; but when I came here it did not. The President has reduced it since that time. It was at that time that I came to Washington, tendering to the Government, through Mr. Denman and Gen. Goethals, our raw material for steel production, on the basis of guaranteed production of the steel at $45.77 per ton; and about the same time we associated with us some shipbuilders on the Lakes, who agreed, if steel was supplied them on that basis, that they would build the ships for $135 a ton; the same ships that were then being laid out at about $150 or $155 a ton.

Gen. Goethals suggested that I should return to Texas and purchase the plant owned by the State, which was being offered for sale, and get into production somewhat earlier.

I went to Texas and commenced that negotiation, found it would be somewhat delayed, and discovered on that trip that an arrangement was being made pretty generally for securing control of the coke of the country, for the purpose of boosting prices. Up to that time we had not owned our own coal land.

The result of that would have been to make our own ore and limestone practically powerless to be of any help, in a general price control, or in lowering prices.

I came back to Washington, by way of Alabama, and bought some 5,000 acres of coal land—something over that—which gave us all these constituent parts of steel production.

I came back here to Washington to report, and just at that time I found Gen. Goethals and Mr. Denman about to retire. I submitted our proposition to the Shipping Board and, as an original proposition, I believe that we would undertake to build the ships at $135 a ton, or to produce steel at $45.77 per ton; to turn over to the Government 20,000,000 tons of ore, 15,000,000 tons of coal, and 10,000,000 tons of limestone—sufficient raw material to produce about 9,000,000 tons of steel, which I thought would make the Government absolutely independent.

Just about that time the President cut the price of steel to $65 per ton—the price you gentlemen all know about. There was still a margin in the actual cost of production, if the Government owned all of its raw material, of about $19 a ton, that I believed, and still believe, could be saved by the Government by the proposition which we submitted.

The general excitement that grew out of the resignation of both Gen. Goethals and Mr. Denman made it impossible for me to get in touch with the Shipping Board for some time.

I called on Hon. Rufus Hardy, of our State, and explained our proposition to him. He went into it very thoroughly, and then we went into it, at his suggestion, with Representative Alexander, of Missouri, chairman of the Committee on the Merchant Marine and Fisheries of the House of Representatives.

Those gentlemen became convinced that it was to the interest of the Government to accept the proposition that we had tendered, inasmuch as the material would make the Government absolutely independent, would reduce the price of steel at least 33⅓ per cent, and reduce the cost of ship construction about 20 per cent.

They secured the influence of the President, and obtained in that way for me the first interview that I had with the Shipping Board.

I found the gentlemen of the Shipping Board overwhelmed with matters of detail. They gave me a courteous hearing, but I was in no way able to satisfy them that it was to the interest of the Government to enter into this arrangement. I did not get that information all at once. I think it was first reported to Mr. Hurley, who was exceedingly courteous; he told me that he did not have time to give the matter proper investigation, and that he would refer it to Admiral Capps. Admiral Capps replied that it was not shipbuilding, and he did not know anything about it.

And it was referred then to the advisory board; it had a good many references around about.

When I came to investigate I found that the advisory board had a subcommittee which was composed of Judge Gary, chairman of the United States Steel Corporation; Mr. Farrell, president of the Steel Corporation; Mr. Schwab, chairman of the board of the Bethlehem Steel Co.; Mr. Grace, president of the Bethlehem Steel Co.; and the usual crowd of "dollar-a-year" people, who are the beneficiaries of the fixed prices. When it was referred to that crowd, I lost all hope.

Senator JONES. Who referred it to "that crowd"?

Mr. FEATHERSTONE. I think it was referred by Mr. Hurley.

Senator JONES. They were not connected with the Shipping Board or the Emergency Fleet Corporation either, were they?

Mr. FEATHERSTONE. I do not know, sir; it was referred to the advisory board.

Senator JONES. That was the advisory board of the National Council of Defense, was it not?

Mr. FEATHERSTONE. Yes, sir; I believe it was.

Senator JONES. Yes.

Mr. FEATHERSTONE. And then it went from there to Mr. Baruch, and I got the same kind of consideration from Mr. Baruch.

Senator HARDING. Did you submit to anybody an estimate of how long it would take to begin with the ore in the ground, and the development of the coal in the ground, and go on to the finished ship?

Mr. FEATHERSTONE. Yes.

Senator HARDING. What was that estimate?

Mr. FEATHERSTONE. At that time—you see we were already somewhat advanced in arrangements for construction.

Senator HARDING. Have you a furnace erected?

Mr. FEATHERSTONE. We have—we will be operating it now in about 90 days.

Senator HARDING. Have your coal mines been opened?

Mr. FEATHERSTONE. We have one mine; yes, sir; that has been operated, that we are arranging to open up now. We would have been more advanced—now, we have been simply relying upon going ahead on our own account; if we had secured the adoption of our plan, we were ready to go ahead in 10 days, and so assured the Shipping Board.

Senator HARDING. That does not quite meet the point that I was trying to get at. How long did you estimate that it would be before you could deliver a ship?

Mr. FEATHERSTONE. We expected to be able to lay a keel in about seven months. Now, all we undertake to do is—we undertake to establish the good faith of our proposition by backing the whole proposition, if the material that we had was sold to the Government, and we were to produce the steel and the shipbuilders were to produce the ships.

Now, we could have been ready in about six or seven months. The shipbuilding people could have had their keels laid, perhaps, somewhat earlier. That was about the 1st of June. As I say, when we got into this position—I stayed here for some little time trying to interest everybody that I could. But when I knew that the matter was finally to be passed upon, or was being referred to these people I have mentioned, I did not see that there was much hope for it.

Senator HARDING. Will you state specifically just what you want the Government to do in this matter?

Mr. FEATHERSTONE. Our proposition was to sell to the Government this raw material for steel production, and the Government was to go into the production of its steel and the building of its own ships, which, I concluded and estimated, could be done for about 25 to 30 per cent less than the prices then obtained.

As an evidence of good faith we agreed to undertake to do the work on a basis that we suggested that the Government could do its own.

Senator HARDING. Now, you say you wanted the Government to build its own ships?

Mr. FEATHERSTONE. That was our suggestion at first; yes, sir.

Senator HARDING. Did you want the Government to produce its own steel?

Mr. FEATHERSTON. Yes, sir.

Senator HARDING. And did you want the Government to produce its own coke?

Mr. FEATHERSTONE. Yes, sir; or we would undertake to produce it for the Government.

Senator HARDING. And you wanted the Government to build the steel plant?

Mr. FEATHERSTONE. No, sir; we wanted to sell the raw material to the Government, and we would build the steel plant. We believed that the Government was getting the worth of it in the transaction, and that the only independent ore field of sufficient magnitude to protect the Government was that which we had; the balance was in the hands of the crowd that was putting up the excess prices,

and our theory was that it was in the interest of the Government to do this.

Now, if the Government bought it, we were to put the proceeds of that into production for the Government. In other words, I discovered this thing, although it did not come out as clearly then as it has in the report of these hearings, that there was to be spent about $21,000,000 up there at Hog Island in building up a plant, the Government to furnish all the money; and on that basis they were paying $65 a ton for steel.

We were satisfied then, and are satisfied now, that the same expenditure at Beaumont, Tex.—and the reason that we selected Beaumont was that it brings together the water transportation and the rail transportation—with practically the same expenditure of money we could put up a plant that would make the steel plates there and build the ships there—and make the steel for $18 or $20 less than the Government was paying for it, and build the ships for 20 per cent less money than you could get them built for in Pennsylvania. We still think that is clearly demonstrated.

We saw no reason why, if the Government was in the position of being obliged to go ahead and make that class of investment without security, a similar investment should not be made which would save the Government at least 20 per cent—we supplying the security and supplying it on the basis of half its value—and thus make the Government absolutely able to fix its own prices, rather than have its prices fixed for it. We thought that it would be to the interest of the Government to do that, and it was on that theory that we made our proposition.

The CHAIRMAN. How much ore land did you say that you had?

Mr. FEATHERSTONE. Our ore had been estimated to run to 60,000,000 tons of 50 per cent or better grade, and about 30,000,000 or 40,000,000 tons of a lower grade.

The CHAIRMAN. How much area would that cover?

Mr. FEATHERSTONE. That would cover about 30,000 acres.

The CHAIRMAN. Is it adjacent to Beaumont, Tex.?

Mr. FEATHERSTONE. It is on our own line of railroad; we built about 30 miles of railroad and connected up with the Santa Fe Railroad, and on that one line haul we can run the ore into Beaumont.

The CHAIRMAN. How far is it from Beaumont?

Mr. FEATHERSTONE. It is about 230 miles from Beaumont. At Beaumont it meets, by water transportation, the coal going down the Big Warrior River into the Gulf of Mexico and then up the Neches River to our plants there; or coming from Mobile, by inland waterways canal not quite completed, all the way into our plant site.

The CHAIRMAN. Did you actually own this property, or did you want the Government to furnish the money with which to acquire it?

Mr. FEATHERSTONE. We own every bit of it; we built our own railroad and made our own arrangements about rates. We have proposed to guarantee the rates, both mining and freight. We did not ask the Government to pay for our railroad or do anything of that sort.

The CHAIRMAN. What was the Government to pay you for?

Mr. FEATHERSTONE. The Government was to pay us—we made it a definite amount, because we thought—we made a substantial proposition to the Government—we fixed it at 20,000,000 tons of ore,

15,000,000 tons of coal, and 10,000,000 tons of limestone—all the ingredients necessary to produce 9,000,000 tons of steel.

The CHAIRMAN. What I was trying to get at is, Was the Government, according to your proposition, to acquire by purchase the raw material or to pay you so much for steel?

Mr. FEATHERSTONE. The Government was to purchase the raw material.

Senator HARDING. What did you propose to furnish iron ore at per ton?

Mr. FEATHERSTONE. Fifty cents per ton.

Senator HARDING. That is, at the mines?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. And what were you to furnish the coal at?

Mr. FEATHERSTONE. Twenty cents a ton.

Senator HARDING. That is interesting. Now, I want to ask you another question: Did the municipality of Beaumont offer to do anything toward establishing this industry there?

Mr. FEATHERSTONE. The municipality of Beaumont gave us a site—not the municipality, but some citizens of Beaumont.

Senator HARDING. Well, that is the same thing.

Mr. FEATHERSTONE. And we have a number of stockholders in Beaumont. We have a plant site there of 267 acres, on the land just adjoining the city on the north, with 20 feet of water on one side and our rail connection on the other. It is about 4 miles down to the municipal dock, where it will meet water 26 feet in depth—into the Gulf. Our plant site is high, well drained, and connected with rail and with water. We have a $1 rate on the iron ore from the mines to the plant site at Beaumont. We have a rate that will bring the coal from Alabama to the plant site at $1.50 a ton. We could assemble the raw material there to produce a ton of pig iron at Beaumont for $10 a ton less than it is being produced for in Pennsylvania now.

Senator HARDING. I wonder if I understood you correctly: Did that price on iron ore and coal mean in the ground?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. Oh, you did not mean to mine it?

Mr. FEATHERSTONE. No, sir; the mining cost, I should say, is about $1; the mining cost in Alabama would be about $1.50—on the coal.

Senator HARDING. Can the ore be taken out with steam shovels?

Mr. FEATHERSTONE. Yes, sir; it is a high-grade ore. We have shipped the ore to Pennsylvania and had it made into steel there; it is pronounced as good as the best of the brown ores of the Mesaba Range.

Senator HARDING. Are they the best ores of the Mesaba Range?

Mr. FEATHERSTONE. Yes, sir; they are as good as the best; there are several kinds; the magnetic ore runs perhaps a little bit higher.

Senator HARDING. Do you have so that you could give it to us off-hand the average price paid for ore at the Mesaba Range?

Mr. FEATHERSTONE. It is running now from 85 cents to $1.50, and for some, $1.60.

Senator HARDING. Is that a war price, or is that the standard rate?

Mr. FEATHERSTONE. Well, most of the contracts that are running are old contracts; the last contract, perhaps, the $1.60 contracts are those that have been made in the last year; there may have been some made recently at higher prices; I do not know. The cost of pig iron—the cost of ore delivered to furnaces near Philadelphia is about $6.65 a ton. Ours delivered to the plant down there would cost about $2.75 a ton. There has been absolutely no contradiction of the fact that we can produce pig iron and steel at $10 a ton less than it is being produced for in Pennsylvania.

Senator HARDING. Did you ever make an estimate of how much the Government will be called upon to expend in order to put this plant in operation?

Mr. FEATHERSTONE. Yes, sir. We made it upon this basis, of what we would undertake to do if the Government made the purchase—of course that would cost the Government just the same; the Government could put in a plant there, or we can put in a plant, that will produce 200 tons of steel a day, on a very economical basis, and will turn out 24 ships a year in a shipyard, at a cost of about $18,000,000. By a little bit later—or continuing the development and construction, and by adding another $1,000,000, the plant would be equipped to produce about 48 ships a year, or 96 ships in two years.

Senator JONES. What size ships?

Mr. FEATHERSTONE. Our estimate has been based on ships of about 7,500 tons.

Senator HARDING. Do you mean that investment of $18,000,000 for the plant, without any charge for the ships?

Mr. FEATHERSTONE. No, sir; that means the shipyard; and it means that it will furnish a steel plant that will turn out plates enough——

Senator HARDING (interposing). For that shipping?

Mr. FEATHERSTONE. For that shipping; yes, sir. And turn out about four times what would be required for that ship construction.

Senator HARDING. But the $18,000,000 would be the plant cost?

Mr. FEATHERSTONE. Yes, sir; and $14,000,000 would be the cost of the raw material.

The CHAIRMAN. How many ways would you have?

Mr. FEATHERSTONE. That we would handle by our engineers; I could not tell you that. One of our engineers is here now, and could go into that more thoroughly than I can.

Senator JONES. You have the deeds for those ore lands, have you?

Mr. FEATHERSTONE. Yes, sir.

Senator JONES. Not merely options?

Mr. FEATHERSTONE. No, sir; we never had options nor royalties. Our titles have been passed on by the best attorneys in Texas.

The CHAIRMAN. I have seen them.

Senator JONES. And the ore lands are paid for in full, are they?

Mr. FEATHERSTONE. Yes, sir. We do not owe a dollar that we can not pay in 60 minutes. We realized the fact that we were not prepared to give immediate service, but, with a full knowledge of the cost of production, we felt that we owed it to the Government to make the tender. We felt that the Government could have 33⅓ per cent of its steel and shipbuilding costs if it was in a position to produce the steel at a reasonable cost and build its own ships.

The CHAIRMAN. You have had that coal analyzed and examined, I suppose, with reference to its coking qualities?

Mr. FEATHERSTONE. Yes, sir; there is a plant within 10 miles of us.

Senator JOHNSON. Have you a corps of engineers?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And have those engineers thoroughly and scientifically gone into the project?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Have they gone into each particular element constituting it?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And are they engineers who are men of ability and standing and repute?

Mr. FEATHERSTONE. Yes, sir; they are men of character.

Senator JOHNSON. And are able immediately to demonstrate the feasibility of the project?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And they have been able to do so for many months?

Mr. FEATHERSTONE. Oh, yes, sir; we have never taken a step, Senator Johnson, that we did not have the advice of the most competent man in his line.

Senator JOHNSON. What engineers have you had, for instance?

Mr. FEATHERSTONE. We had Mr. Dickman make an investigation of the character and quantity of the ore land; R. N. Dickman. He made that investigation on the suggestion of Mr. Ripley, president of the Santa Fe Railroad; that investigation was made in 1909 and 1910.

Senator JOHNSON. Did he report to Mr. Ripley, the president of the Santa Fe Railroad?

Mr. FEATHERSTONE. Yes.

Senator JOHNSON. And his report showed that the ore was of the character that you suggest?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. You say that was in 1909 and 1910?

Mr. FEATHERSTONE. Yes.

Senator JOHNSON. Subsequently to that time, has he been in your employment?

Mr. FEATHERSTONE. No, sir; we do not need him.

Senator JOHNSON. What engineers have you had within the last year?

Mr. FEATHERSTONE. Since that time we have had Mr. Catlett, of Staunton, Va.; he made an investigation. Recently we have needed no engineer for that purpose; we have had our railroad engineers. As to the analyses, there were several thousand samples taken, and the analyses were made by the best chemists to be found in the country.

Senator JOHNSON. Who?

Mr. FEATHERSTONE. Well, Mr. Dickman made his; Mr. Catlett made his; and the McCreath & Sons, at Philadelphia; in order to know whether or not we had the ore, whether it would measure up to the samples, we shipped to Allen Wood & Co., just outside of Philadelphia, two cargoes containing, perhaps, something over 5,000 tons.

Senator JOHNSON. Just what was contained in those cars?

Mr. FEATHERSTONE. In a cargo?

Senator JOHNSON. Yes.

Mr. FEATHERSTONE. Iron ore. And McCreath & Sons made the analysis which would determine, between buyer and seller, the value; one cargo went 57.45% metallic contents, and the other cargo went 56.21%.

Senator JOHNSON. When were those analyses made?

Mr. FEATHERSTONE. Those analyses were made in 1912 or 1913.

Senator JOHNSON. When you called upon the subcommittee of the Council of National Defense, composed of the gentlemen you have named, Mr. Gary and others, what did they say to you?

Mr. FEATHERSTONE. They did not say anything; we were just notified that we were turned down.

Senator JOHNSON. Well, how did you present your proposition?

Mr. FEATHERSTONE. I suppose it was referred in a letter, and our statement was handed to them.

Senator JOHNSON. You had no personal interview?

Mr. FEATHERSTONE. None at all.

Senator JOHNSON. Did you subsequently have an interview with Mr. Baruch?

Mr. FEATHERSTONE. Mr. Hardy did; I did not.

Senator JOHNSON. Was there any reason assigned for turning down the particular project by the subcommittee?

Mr. FEATHERSTONE. Yes, sir; that the Government was not prepared, or did not intend, to go into any project of that sort—of ownership and production.

Now, we have proceeded, Senator Johnson—this analysis was made—in 1909 and 1910 it was first made, and then a later one in 1912. We got into this proposition at the suggestion of, or with the cooperation of, Mr. Ripley, of the Santa Fe Railroad, with the understanding that we were to supply the ore. They would extend their railroad up to the ore beds, and they were to give us a $1 rate to tidewater. They went before the commission of Texas and established the $1 rate. At that time they were not within 30 miles of the ore, but it was always understood that we were to be assisted in the development. We went ahead and acquired the ore; we put up all the money we had and could get hold of with the expectation that the 30 miles of railroad was to be built by the Santa Fe Railroad, and to be extended through that part of the State.

Senator JOHNSON. Has it been constructed?

Mr. FEATHERSTONE. Yes, sir; but we did it. Just about the time that we got in that shape, Mr. Ripley wired me and asked me to meet him in New York, that he was having some trouble. He needed to carry out his part of the program about $2,800,000. He had made the usual requirement or requisition to the board in New York. He incidentally mentioned that it was their intention to do this construction at any rate, but that the development of some iron ores there would give them some considerable tonnage immediately and would add $1,000 a day to the earnings.

Mr. Frick and Mr. Steele, of J. P. Morgan & Co., were directors of the Santa Fe Railroad and directors of the United States Steel Corporation. That threw a bomb into the camp; and Mr. Ripley was told that he would have to take that matter up with a special committee. He wired me to come to New York, and I went there and met him. When I got there he told me that there was some trouble in his getting the money and doing the part he had agreed to do, and he

wanted me there, from the fact that I knew the situation from the ground, and he wanted me to help him see if we could not get it through; he wanted me to go down with him and attend a meeting. There had been a special committee of his board appointed to pass upon whether or not that $2,800,000 was going to be turned over to him to extend this road 30 miles.

We went on down to the club; we met in a private dining room; I had not asked who the committee was composed of, but we got down there, and I was introduced to Mr. Frick and Mr. Steele and Mr. Berwind—that was the committee. I did not think there was very much prospect of success, but we did the best we could. The meeting developed into a row; it was a typical United States Steel Corporation meeting.

Now, that explains why nothing was done; they refused to do anything.

Senator JOHNSON. Now, Mr. Featherstone, let us assume that the chairman of this committee had the power of the United States Government to accept your proposition. Let us take in sequence now what is necessary to be done:

First, the chairman says to you, "We will go into your proposition." Now, where would we start? What is the first thing you would do?

Mr. FEATHERSTONE. Turn over the titles to you to this property.

Senator JOHNSON. All right; what next?

Mr. FEATHERSTONE. We will take that money, every dollar of it, and put it into the plant.

Senator JOHNSON. Now, you say you will turn over the titles of the property?

Mr. FEATHERSTONE. The property itself.

Senator JOHNSON. For what?

Mr. FEATHERSTONE. The total is $14,000,000.

Senator JOHNSON. That is, you turn over this property to the United States Government, first, for $14,000,000?

Mr. FEATHERSTONE. Yes; that is right.

Senator JOHNSON. All right; then what?

Mr. FEATHERSTONE. Then we take that money—or the United States can determine not to pay it out, except in the building of just the plant that I have outlined to you, that is necessary to produce and manufacture steel.

Senator JOHNSON. That is, your idea is that the Government would retain the purchase price of your properties and devote it to the construction of such works as would be necessary to manufacture steel?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. In order to manufacture steel at the particular locality that you suggest, in Beaumont, Tex., what is necessary to be done—first, the construction of works there?

Mr. FEATHERSTONE. Yes, sir; we own the ground.

Senator JOHNSON. You have already bought the ground?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Secondly, in order to assemble the constituent elements to manufacture steel, what must you do?

Mr. FEATHERSTONE. Mine the ore.

Senator JOHNSON. Mine the iron ore?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And that is how far from Beaumont, Tex.? The iron ore is how far from Beaumont?

Mr. FEATHERSTONE. On one line haul, at a $1 rate, about 230 miles.

Senator JOHNSON. About 230 miles?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. The railroad connection is direct?

Mr. FEATHERSTONE. Yes, sir; right into the plant.

Senator JOHNSON. When you speak of mining the ore, you do not mean the opening up of virgin ground?

Mr. FEATHERSTON. No, sir; we have mined some ore.

Senator JOHNSON. You have mined some ore?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. You have mined sufficient to——

Mr. FEATHERSTONE (interposing). To determine the cost?

Senator JOHNSON. No; you have done it, I presume. simply to determine what was in the ground?

Mr. FEATHERSTONE. No, sir.

Senator JOHNSON. Is it merely exploration on your part, or is it an actual mine there?

Mr. FEATHERSTONE. It is a mine. We could turn right in to-morrow with a steam shovel and be loading ore by to-morrow night.

Senator JOHNSON. I see; and that ore thus mined would be taken on your railroad to Beaumont?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And what next would you have to do?

Mr. FEATHERSTONE. Produce and ship the coal in from Alabama.

Senator JOHNSON. That is, you would ship the coal from Alabama by water to Beaumont, Tex..

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Well, in Alabama, where you have now the coal mines, they are as yet undeveloped, are they not?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. They would have to be opened up as mines, would they not?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And the entire processes of mining gone through?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And then that coal shipped into Beaumont, Tex.?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Would there be any other steps necessary?

Mr. FEATHERSTONE. Then the limestone would be next.

Senator JOHNSON. And the limestone is how far from Beaumont?

Mr. FEATHERSTONE. About 300 miles, of one rail haul.

Senator JOHNSON. With direct railroad connections?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Your limestone is in what—in surface deposits?

Mr. FEATHERSTONE. Yes, sir; we can mine it without any trouble and load it on the car at a cost of 50 cents a ton.

Senator JOHNSON. You could immediately load it?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. And that would be a haul of what distance to Beaumont?

Mr. FEATHERSTONE. About 300 miles.

Senator JOHNSON. When you would have the three constituent elements of steel?

Mr. FEATHERSTONE. Yes, sir.

Senator JOHNSON. Are there any others?

Mr. FEATHERSTONE. Yes, sir; there might be some manganese.

Senator JOHNSON. And that you would have where?

Mr. FEATHERSTONE. That could be obtained in the State of Texas.

Senator JOHNSON. You do not own that, do you?

Mr. FEATHERSTONE. No, sir.

Senator JOHNSON. That would have to be acquired by the Government outside?

Mr. FEATHERSTONE. Yes, sir; but the percentage is very small.

Senator HARDING. That is very interesting; have they developed managanese in Texas?

Mr. FEATHERSTONE. Yes, sir; some.

Senator HARDING. To any considerable quantity?

Mr. FEATHERSTONE. Well, it has been gone into recently, by a Minneapolis man, and he has been shipping some to Chicago. Now, they have considerable maganese; he wrote me, perhaps 30 days ago——

Senator JOHNSON (interposing). Well, Col. Featherstone, taking into consideration the bringing together of all these constituent elements, the mining of them, and the like, the hauling that has to be done by rail, and then the hauling that has to be done by water, and the construction of the new works, would not such a time elapse in getting your plan into actual operation that really it would be of little consequence in meeting the emergency that this country now faces?

Mr. FEATHERSTONE. Well, Senator Johnson, for producing ships immediately that is true; but at the end of a year——

Senator JOHNSON (interposing). Let us omit the ships; but for the manufacture of steel, would it not require such a lapse of time in the construction of the work, the development of the property, the hauling, the getting together of labor, and the various elements, that it would not be of value in this particular war emergency?

Mr. FEATHERSTONE. Well, Senator Johnson, we could be producing steel there within a year.

Senator JOHNSON. You feel perfectly sure that you could, do you?

Mr. FEATHERSTONE. Oh, yes, sir; that is easy. We have engineers in charge of each of the departments; we are simply doing more economically what the Steel Corporation, and all of them, are doing; we do it more economically because our deposits are closer together.

Senator JOHNSON. Let us take the other end of it now: You say you are doing it more economically. Where are the elements gathered from that are manufactured into steel in Pennsylvania?

Mr. FEATHERSTONE. Well, sir, the ore is from the Mesaba Range.

Senator JOHNSON. Where is that?

Mr. FEATHERSTONE. That is up in Wisconsin and Minnesota. And it is mined up there, and then hauled down to the Lakes by rail, and then loaded into a ship, and then carried up through the Lakes to

Buffalo—there are several other unloading places on the Lakes. And then it is taken out of the ship and loaded into the cars and sent down into Pennsylvania. By the time it gets down there now, it is worth about $6.65 a ton.

Now, with us we mine and load into the cars and deliver at the yard without touching it another time, and allowing a liberal charge we can do that at $2.75 a ton.

Now, when it comes to the other ingredients, they are getting their coke not quite as cheaply as we can.

Senator JOHNSON. Where do they get theirs?

Mr. FEATHERSTONE. They get theirs from Connellsville.

Senator JOHNSON. Where is that?

Mr. FEATHERSTONE. It is just out of Pittsburgh, 60 or 70 or 80 miles. From that territory they get their coke at the Government price of $6 a ton; with the freight added it makes most of the coke cost them about $8 a ton.

Senator JOHNSON. The other elements they get from where?

Mr. FEATHERSTONE. It is pretty well distributed throughout that country; the limestone they get just about as cheaply as we get it.

Senator JOHNSON. They get it from nearby, do they?

Mr. FEATHERSTONE. Yes, sir; but the constituents necessary to make a ton of steel we can get together for $10 a ton less than they can in Pennsylvania.

Senator JOHNSON. Do you know how much we are expending at Hog Island in building the yards there?

Mr. FEATHERSTONE. I got the impression here, while I was trying to get our proposition through, that they are going to spend about $20,000,000. I understand from reading the record of the hearings of your committee, that it will be considerably over that sum.

Senator JOHNSON. Do you mean in the construction of the yards alone?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. Did I understand you correctly to say that you had bought some State property which included a furnace which you could operate?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. How far is that from this plant at Beaumont?

Mr. FEEATHERSTONE. One hundred and seventy miles on a downhill pull, right to our yard.

The CHAIRMAN. Was it your proposition that the Government should take over this furnace at all?

Mr. FEATHERSTONE. No, sir. Our theory is that the Government could take anything we have got that it wants. But our theory of this proposition was to put in a new plant and utilize the pig iron, and that would give us a production of perhaps 200 tons a day for this single plant.

The CHAIRMAN. I thought you meant this 267 acres at Beaumont, on the river there, was intended as a shipbuilding plant.

Mr. FEATHERSTONE. Yes; that is correct.

The CHAIRMAN. That would be the shipbuilding plant?

Mr. FEATHERSTONE. Yes, sir; and it is a plant for the steel yard, too.

The CHAIRMAN. It is a plant for the steel production also?

Mr. FEATHERSTONE. Yes, sir; put the two together. It is on high ground, running off down to the river.

Senator HARDING. You say you were going to turn over something to the Government for $18,000,000. Specifically, what does that represent? What do you turn over to the Government for $18,000,000?

Mr. FEATHERSTONE. $14,000,000.

Senator HARDING. All right, $14,000,000; $4,000,000 does not make much difference nowadays.

Mr. FEATHERSTONE. We would turn over 20,000,000 tons of iron ore.

Senator HARDING. That is, in the ground?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. Is that supposed to exhaust the ore lands?

Mr. FEATHERSTONE. No, sir; you can have all we have got; but, as I said, my theory on that was to offer enough so that there could be no question about quantity sufficient to justify the Government in making the development.

Senator HARDING. You retain the title to the lands?

Mr. FEATHERSTONE. No, sir; our theory was to measure up and transfer to the Government.

Senator HARDING. In other words, you mean to sell out to the Government?

Mr. FEATHERSTONE. Yes, sir; sell out, or sell just what we have offered—yes, sir; sell out and use that money in production for the Government.

Senator HARDING. Well, you are not turning over to the Government in this proposition your entire holdings of ore land?

Mr. FEATHERSTONE. No, sir.

Senator HARDING. What proportion would you turn over?

Mr. FEATHERSTONE. Just about a third, I think. But the Government can take all if it wants to. Our theory was that it would fortify the Government and protect it in this fight. At that time we did not know what you have just suggested—that a matter of four or five million dollars did not amount to anything nowadays.

Judge Hardy suggests that I have not made it clear that what we would tender was 20,000,000 tons of iron ore, 15,000,000 tons of coal, and 10,000,000 tons of limestone; it is about one-third of what we have, from the estimates of our engineers.

And the proposition was submitted on that basis, because it was a sufficient amount to justify the Government, as we thought, in entering into its own production and without asking an expenditure that perhaps the Government might think was unwarranted.

If in the best interests of the Government it is necessary, we will turn over all that we have.

Senator HARDING. I do not want to ask you, Col. Featherstone, an unfair question——

Mr. FEATHERSTONE. Go ahead; ask anything you want.

Senator HARDING (continuing). And I do not want to be misconstrued as to my motive. But do you know that we are all the time looking out for a little profiteering?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. And we find that there is a conflict between profiteering and patriotism all the time.

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. May I ask you, if it would not embarrass you, to indicate to the committee what your actual investment down there is?

Mr. FEATHERSTONE. We commenced investing down there nine years ago. We have had to build 30 miles of railroad that the Santa Fe Railroad did not build. We have had to purchase the ore and the coal. Our investment amounts to a little less than $3,000,000, but it has been made—it has been in there, most of it, for seven or eight years, and when we went in there the ore was worth practically nothing from the fact that the freight rates were against it. From my experience in railroad construction I was enabled to build a railroad and get the rate reduced in that locality from $1.80 to $1 per ton.

Now, we have to take up and assist in the development of the water transportation. In those matters we have brought together a commodity that at the time we commenced really had no value, owing to lack of transportation facilities. We went into the transportation business, worked out those matters, and gave it a value.

Now, the price I am naming is not based on what it has originally cost us. It has cost us eight years of effort.

Senator HARDING. That is worth something, of course. Now, do you include the cost of building the railroad in that amount of investment, and do you mean to sell the railroad to the Government?

Mr. FEATHERSTONE. No, sir. The fact of the matter is that the railroad is tied up in this fight with the Santa Fe Railroad and the Steel Corporation.

Senator HARDING. Did you tell us what the railroad cost?

Mr. FEATHERSTONE. The railroad cost about $800,000.

Senator HARDING. So that, then, apart from the elements of time, and the expenditure of effort and confidence, all of which I admit are valuable, your actual outlay down there is a little more than $2,000,000, is it?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. And you want to sell to the Government one-third of this property, as I understand it?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. So that in this arrangement you would sell to the Government for $14,000,000 what stands you just about one-third of $2,250,000?

Mr. FEATHERSTONE. I follow your reasoning, but——

Senator HARDING (interposing). I am not going to ask you to disavow the value that comes from a valuable position.

Mr. FEATHERSTONE. Senator Harding, I will answer you in just this way: At the time we commenced that it had no value. We developed the value. Now, we are tendering to the Government——

Senator HARDING (interposing). Let me ask you right there: Is it not a fact that it has no value until you establish the industry——

Mr. FEATHERSTONE. Well, perhaps that is true, but we will be making steel there in 90 days.

Senator HARDING (continuing). Because I know people who acquired acres and acres of land in the Mesaba Range at $1 an acre; and now the smallest royalty paid on iron ore there is 95 cents. Now, the transportation lines and the connection of those ore lands with the steel industry has made them valuable; that is the enevitable law of development.

Mr. FEATHERSTONE. Now, then, we take this view: That that ore that will produce steel or pig iron at $10 a ton less than the combination of circumstances——

Senator HARDING (interposing). That is for the war; will it do it ordinarily?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. I am not trying to be very acute or critical about the matter, because I know very little about it, but I want to learn. Here is the point that I had in mind: I know a little about iron ore in normal times from being a stockholder, to a very trivial extent, in a malleable-iron plant.

What could you produce pig iron for when the normal market price for pig iron was $17?

Mr. FEATHERSTONE. About $11. Now we figure it at $15.90.

I would like to answer a question that you asked a moment ago as to the original cost.

If ore is worth $1 a ton, or 85 cents a ton, in the Mesaba Range, where your pig iron cost is $26, and we have pig iron produced at $15.90, does that not give that ore a value, regardless of what the original cost was?

Senator HARDING. Oh, I think that is true, but this is the unavoidable conclusion: The ore is perfectly valueless until you find a market for it.

Now, I want to ask you another question, and I hope you will not think I am unsympathetic; there is some attraction about the thing. But I want simply to say that I am not deeply impressed by anything that you can do to meet this war emergency, although as a steel proposition it looks interesting. Has this matter ever been called intimately to the attention of any steel producers—practical steel men?

Mr. FEATHERSTONE. They have been trying to take it away from us, Senator Harding, for the last six or seven years.

Senator HARDING. I do not know that it is pertinent, but I would like to know what you mean by that.

Mr. FEATHERSTONE. I mean exactly this——

Senator HARDING (interposing). Freezing you out, or something like that?

Mr. FEATHERSTONE. At the meeting in New York Mr. Ripler refused to build the railroad that they had agreed to build; that made it necessary for us to build it. Mr. Ripler personally did his best to help us by proposing to furnish the rails if we built the railroad, and said that if we would build the railroad he would take it under a lease; he would lease it when it was built. We went in and built it.

Senator HARDING. How long have you had that railroad?

Mr. FEATHERSTONE. That has been about seven years ago.

Senator HARDING. And then you have had the transportation for seven years and still no furnace?

Mr. FEATHERSTONE. Let me answer that, Senator Harding. What I started in to make was this: At the dictation of that eastern board the building of that railroad was thrown onto us and was not taken over, and our money was tied up there. Now, immediately they began to come along—this fellow and that, and among them my own bank—and advised me that I had better turn loose; that we were not able to take care of it, but should let the New York fellows have it.

Senator HARDING. I would change bankers, for one thing, in a case of that kind.

Mr. FEATHERSTONE. I did.

Senator HARDING. I do not think it is important to pursue what would be an interesting discussion ordinarily, relating to the development of an industry, but I want to ask you a predicated question.

Mr. FEATHERSTONE. Very well, sir.

Senator HARDING. Suppose you were responsible, in this emergency, for ships, and you had listened to repeated witnesses at this table who expressed the opinion that it was better to enlarge and encourage established industries rather than venture on new ones. Would you still favor recommending that the Government begin this enterprise from the beginning, with the ore in the ground, to meet this emergency?

Mr. FEATHERSTONE. Senator Harding, if the Government was getting ships and getting steel at reasonable prices and there was no tendency to advance those prices, and the Government did not need any protection and was perfectly willing to pay all that anybody asks, then I would go ahead and give the fellows that are getting the big prices all they asked and I wanted. If I wanted to protect the Government and wanted to get what was done at a reasonable price, I would make this investment, and I would proceed to make steel, and I would demonstrate the fact that steel could be produced by the Government out of this material at one-half the price that the President has already been obliged to allow.

The CHAIRMAN. Your suggestion was that this $14,000,000 would go to you and be invested in a plant?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. Do you mean a steel-manufacturing plant?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN (continuing). Or a shipbuilding plant?

Mr. FEATHERSTONE. Both, Mr. Chairman.

The CHAIRMAN. Both a steel-manufacturing and a shipbuilding plant?

Mr. FEATHERSTONE. Yes, sir; the amount I gave here would be for both.

The CHAIRMAN. That would be your steel plant?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. The Government would not own the plants at all?

Mr. FEATHERSTONE. No, sir.

The CHAIRMAN. It would be your plant?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. And you would then make contract with the Government to build ships at a certain figure and furnish steel at a certain figure?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. And you would make that contract in advance?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. Before the plant was put up?

Mr. FEATHERSTONE. Yes, sir.

The CHAIRMAN. And then you say that price would be how much for steel and how much for ships?

Mr. FEATHERSTONE. Well, our price that has been named in the proposition that I submitted was $45.77 a ton for steel and $135 a ton for ships, or $140 a ton for ships, and the price that was being contracted for at that time for ships was about $165 a ton.

The CHAIRMAN. And would you still be willing to make that agreement.

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. There is another question that arises in my mind. Suppose that the Government does this original work, in a self-defensive attitude on steel, and the emergency passes; you own the plant and you own a major portion of the ore land; what would prevent your company from becoming affiliated with the steel sharks and maintaining the high prices?

Mr. FEATHERSTONE. A part of this proposition is this, that in this production we buy back this material from the United States as used at cost plus 50 per cent.

Senator HARDING. Well, that does not quite answer my question, although I get the point you make. You mean to amortize the investment of the Government by buying back. Assuming that under a policy of Government development and ownership we embark on that rather philanthropic program, and you have reacquired the property, what is to prevent you from entering into amicable relationships with the big steel manufacturers and maintaining the prices that they exact?

Mr. FEATHERSTONE. I think, Senator Harding, that the United States has got plenty of good lawyers, and plenty of good Senators to protect it.

Senator HARDING. Well, we will admit the latter, anyway. [Laughter.]

Mr. FEATHERSTONE. You would have the Government against that sort of thing, when the Government has already suffered so much as the result of a contrary policy?

Senator HARDING. I am not speaking of the Government just now. I am assuming that the emergency has passed, and you have been launched into the steel business through the Government's kindly advances of money, and the Government is no longer in this emergency and anxious to get ships; you have acquired your property and have been established in the steel industry. What advantage have we, then?

Mr. FEATHERSTONE. My answer to that is that at the commencement here the opportunity for the Government to protect itself in the contract is at the beginning; and then besides that I do not believe this condition of affairs is going to be allowed to continue—when the trust combination can control.

Senator HARDING. Perhaps I can elucidate my meaning a little.

Mr. FEATHERSTONE. All right, sir.

Senator HARDING. I was reading, within the last year, in the report of the American Steel Institute, of the establishment of steel plants in China where steel is produced at less than the cost of pig iron in his country; steel rails are rolled, for example, at something like $12 per ton.

Mr. FEATHERSTONE. I have understood so.

Senator HARDING. You never hear of any selling in this country at that rate, do you?

Mr. FEATHERSTONE. No, sir; I do not think they have ever been able to produce enough there to supply their own demands; and the labor is about 10 cents a day to do this work.

Senator HARDING. Well, it does not sell over there any lower than the average world market for steel?

Mr. FEATHERSTONE. I do not know about that.

Senator HARDING. The point I am trying to get at is, that if the Government is going to embark in this sort of proposition—for which there seems to be a tendency nowadays, what are the benefits to accrue to the general citienship of the country?

Mr. FEATHERSTONE. Then, Senator Harding, say this—that the Government will take over the whole plant, after we have produced it; take an option, take it over and operate it at cost, on a valuation that is equitable. It seems to me that with the experience the Government has had and is having now that in a case like this there would not be any trouble in protecting the Government against that sort of crookedness.

Senator HARDING. Would you favor that sort of policy?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING (continuing). Of the Government taking the whole plant and operating it?

Mr. FEATHERSTONE. Yes, sir; I believe it is to the best interests of the whole country. I do not think there is any doubt of it; I believe they can make steel cheaper than it is being made.

Now, I would like to say this, in discussing this matter with the Shipping Board I tried to illustrate the value of this material by saying that sufficient steel could be made to produce 2,000 ships of 7,500 tons dead weight each and leave 4,800,000 tons of steel, sufficient to meet the needs of the Navy and the Army for 10 years, and then have enough left to build a railroad across the continent from the Atlantic to the Pacific and another one from Winnipeg south to the Panama Canal and 200 miles to each State in the Union for feeders. That is what is possible to be produced by this raw material—that is, out of the quantity offered in our proposition.

And, so far as I can understand, after a long and patient consideration of the matter, it seems to me that the Government will be obliged eventually to do one of two things—either to own its raw material and manufacture its steel or to take over the concerns that it finds difficulty in controlling.

And I realize the fact that that is a rather radical idea; but so was the fact that the Government would take over the railorads six months ago.

Senator HARDING. Did your figures contemplate sufficient expenditure to build coking plants?

Mr. FEATHERSTONE. Yes, sir.

Senator HARDING. Now, let me ask you the main question. You know that this committee really has no control over the action of the Shipping Board?

Mr. FEATHERSTONE. Yes, sir; I understand.

Senator HARDING. What is your suggestion as to the necessary measure to put your plans for this development into a practical plan of operation? And what would you have done to bring about the realization, for instance, of your plants here? In other words, what would you suggest that the committee do, or the Senate do, or the Congress do?

Mr. FEATHERSTONE. Well, I had not gone that far in the consideration of the matter. My theory was this: I have been of the im-

pression that Mr. Hurley was very much handicapped; I have learned——

Senator HARDING (interposing). In just what way, please?

Mr. FEATHERSTONE. In various and sundry ways. I would not like to discuss that subject unless the committee was in executive session.

But my idea is that if left to himself, as any good business man should be, as to the plan to be devised, he could make it effective without much trouble. For instance, for our end of it, we would put down there our transportation man in charge of one end of it, our fuel man in charge of another end, the blast-furnace man in charge of another, and the steel man in another, and tell them to do it. Now, I think that could be carried out very easily; it is not very difficult; it is not any more difficult than building a railroad—and building a railroad is very good fun. As to those things you would of course need the advice of the Attorney General——

The CHAIRMAN. And would need the money?

Mr. FEATHERSTONE. Yes, sir; and would need the money.

Now, gentlemen, we want to say this to you: We are going to make iron and steel in Texas anyhow. It is our material; and anything we can do is at your command. We do not want any special favors. If we did not believe this proposition was for the very best interests of the Government, we would not be here. And we shall not feel aggrieved at whatever may be your conclusion or whatever may be the conclusion of the committee.

The CHAIRMAN. Does your present plan contemplate the building of that shipyard and the building of ships?

Mr. FEATHERSTONE. No, sir; we would not do that without the agreement of the Government. Our plan is to go ahead and produce the pig iron, and the pipe, and the cotton ties, and matters of that kind, for the local market, which we can do on a very profitable basis. But the difficulty has been, and will be, for us that we will have to build patiently. We are using Texas money, some Alabama money, and money from adjoining States; and we are getting it as fast as we can use it along the lines we contemplate. In that way we can not be of any service to the Government.

In the other way, we thought that the Government was getting in value in raw material twice what we were asking for, and has a club to protect itself with and defend itself with from the combination which made necessary the building of an armor-plate plant—that we have given the best club that was left. Since President Roosevelt surrendered to Mr. Gary and Mr. Frick and allowed them to take over the Tennessee Coal & Iron Co., there is not left in the United States an independent ownership of ore except ours that would be sufficient to make the United States absolutely independent of the aggressions of this crowd. That is the way we feel about it; there is no other except ours.

Senator JONES. You represent a company, do you?

Mr. FEATHERSTONE. Yes, sir; I represent two companies.

Senator JONES. What are the names of the companies?

Mr. FEATHERSTONE. The Texas Steel Co. and the East Texas Brown Ore Development Co.

Senator JONES. Which company owns this ore?

Mr. FEATHERSTON. Both.

Senator JONES. In what way?

Mr. FEATHERSTONE. Well, their acreage is separate; I happen to be president of both companies.

Senator JONES. How much does the Texas Steel Co. own?

Mr. FEATHERSTONE. The Texas Steel Co. owns about 10,000 acres of ore land.

Senator JONES. Of what?

Mr. FEATHERSTONE. Iron-ore land.

Senator JONES. Which company owns the 5,000 acres of coal land?

Mr. FEATHERSTONE. It is owned jointly by the two companies, the coal land is.

Senator JONES. What is the capital stock of each company?

Mr. FEATHERSTONE. $2,500,000 each.

Senator JONES. How much of it is paid in?

Mr. FEATHERSTONE. All of the East Texas Brown Ore Development Co. and about $1,700,000 in the Texas Steel Co.

The CHAIRMAN. Is it paid in in cash or in land?

Mr. FEATHERSTONE. Both cash and land.

Senator JONES. How much cash?

Mr. FEATHERSTONE. Something over $2,000,000.

Now, gentlemen, after the hearing is over I will think of a good many other points that I should have stated to you.

Senator HARDING. What was the earliest date that this proposition was presented to the Shipping Board?

Mr. FEATHERSTONE. I had a talk with Gen. Goethals in April, and he advised me to go to Texas—in May, I believe it was—and buy this other plant. And I had a talk at the same time with Mr. Denman, and the matter was progressing, as I thought, very satisfactorily. Then the first time it was presented to this advisory board, I think, was in July—after the matter was settled and the row had quieted down.

Senator HARDING. If it had been presented last April it would have been more opportune than now.

Mr. FEATHERSTONE. We thought the earlier the better; yes, sir. We would have been making steel by this time and we would have had keels laid for ships. I do not think there is any doubt about that. The man that we had the contract with to do the shipbuilding has gotten some shipbuilding contracts himself at a good deal more money; he is not available for the present.

Senator HARDING. Suppose you were the Director of the Emergency Fleet Corporation: To meet this situation would you direct your energies where we already have a foothold and are producing ships, or would you develop them and give some attention to that development?

Mr. FEATHERSTONE. I would do both. I believe this: It is worth a billion dollars in protection against the coming campaign or the continued campaign for higher prices. Now, I know I can not tell you gentlemen anything new when I say that plans are well afoot to continue the increased prices; prices are already declared to be insufficient; taxes are complained of, and all that sort of thing—a regular campaign is afoot.

Senator JONES. Do you not think it would be better to commandeer these plants?

Mr. FEATHERSTONE. Well, I think you might have done that a good while ago.

Senator JONES. Well, there is nothing to prevent doing it now, is there?

Mr. FEATHERSTONE. Not a thing.

Senator JONES. And that is sufficient protection, is it not?

Mr. FEATHERSTON. Well, if our proposition stands in your way, we can back out right now.

Senator JONES. Of course, we can commandeer your plant also.

Mr. FEATHERSTONE. Of course, you can take all we have got.

Senator HARDING. If that was the policy of the Government, would you go on with the development of your plant personally?

Mr. FEATHERSTONE. Well, I will tell you that I have a good deal of faith in this Government—and in the Senators and Members of Congress. I am ready to risk anything on earth to-day, and I would not hesitate a minute on account of any fear of what the Government was going to do for me.

Senator HARDING. Well, let me put it a little differently—although I thank you for your confidence: Suppose the Government commandeered the steel plants already in existence, and suppose you could, by your processes, continue the progress of your company, would you go on with your steel plant?

Mr. FEATHERSTONE. Yes, sir; I would not hesitate a minute. I take this for granted, that the Government would not commandeer the plant unless it was a necessity, and I would bow to that necessity. I do not intend to stop work for one minute; and if we are at work down there, and if the Government does need it, or needs us, it can take us or anything we have got.

Senator HARDING. Well, I think that is the general war spirit to-day.

Mr. FEATHERSTONE. I hope so, sir.

Senator HARDING. But I was thinking more of peace times than war times in asking those questions.

Mr. FEATHERSTONE. It looks as if that is a good ways off.

Mr. Chairman, and gentlemen of the committee, I thank you very much for the courtesy you have shown me.

The CHAIRMAN. We are very much obliged to you for your statement, Mr. Featherstone.

The written statement which you say you have prepared you can hand to the reporter, and it can go into the record.

Mr. FEATHERSTONE. The statement I had prepared is as follows:

The proposition and proposal of the Texas Steel Co., as submitted by me for the company to the United States Shipping Board, with a further feature concerning the sale of certain quantities of raw material to the Government, hereinafter mentioned, was and is to make steel for the Government for $15.77 per ton as against $65 per ton now being paid by the Government, and to build steel ships at the company's shipyard at Beaumont, Tex., at $140 per dead weight ton, as against $165 to $171, about, per dead-weight ton now being paid by the Government under contracts let by the United States Shipping Board.

The proposition as finally modified and submitted heretofore to the Shipping Board went further in the matter of possible reduction of the cost of steel plate and steel ship building. The prices hereinabove given were guaranteed by the company as maximum prices, which should not be exceeded, conditioned upon the Government actively discouraging campaigning for higher prices, and we proposed that with these guaranties of protection goes this further proposition, to produce this steel and build these ships, with books open to the Gov-

ernment, with the condition that should the prices named above prove excessive, then it is agreed that a board of arbitration, or such board or committee as may be agreed upon, may reduce the price to the cost of production and plant maintenance with a reasonable profit. Under protection thus provided for it is shown to be a reasonable conclusion that a further reduction of cost of steel of 25 per cent and building of steel ships of 20 per cent may be made to the Government, bringing the cost of steel to the Government down to $34.33 per ton instead of present price of $65 per ton, and bringing the cost of steel merchant-marine ships down to $105 per dead-weight ton instead of the average of $166 per dead-weight ton now being paid by the Government under contracts with the United States Shipping Board.

For basis of the foregoing statement of the proposals of this company to make steel and to build steel ships on these prices, so much reduced below the prices now being paid by the United States Shipping Board, I have to submit to your committee the following facts and figures, which are the result of most careful calculations and estimates and examinations made in the markets and in places where the facts can be absolutely determined and based upon the values of the things mentioned in the open markets of the day. I here submit the following comparative statement showing where, as a matter of actual figures, that pig iron can be produced at Beaumont, Tex., at a cost of $10.24 less than it is produced at Philadelphia. My first showing is the cost of pig iron at Philadelphia:

Iron ore:	
Lake ports, fixed, per gross ton	$5.05
Freight and handling, per gross ton	1.60
Total	6.65
Coke:	
Connelsville, fixed, per net ton	6.00
Freight and handling, per net ton	2.20
Total	8.20
Limestone, delivered at Philadelphia, per net ton	2.00

Of the above material, all going as the elementary constituents of pig iron, the following quantities, as is well known, are required to produce a ton of iron:

2 tons ore, at $6.65 per ton	$13.30
1⅓ tons coke, at $8.20 per ton	9.84
½ ton limestone, at $2 per ton	1.00
Total	24.14
Labor cost and plant maintenance	2.00
Total cost of pig iron at Philadelphia, per ton	26.14

Cost of pig iron at Beaumont:	
Iron ore, delivered at plant, per gross ton	2.75
Coke, by-product process, per net ton	6.00
Limestone, delivered at plant, per net ton	2.40
Quantities required to produce ton of iron:	
2 tons ore, at $2.75 per ton	5.50
1⅓ tons coke, at $6 per ton	7.20
½ ton limestone, at $2.40 per ton	1.20
Total	13.90
Labor cost and plant maintenance	2.00
Total cost of pig iron at Beaumont	15.50

Showing as above stated, a balance in favor of production of pig iron at Beaumont of $10.24 per ton less and cheaper than its production at Philadelphia.

The balance in Beaumont's favor on cost of conversion of this pig iron or hot metal into steel plates is still greater. The scrap for economizing conversion of this iron into steel can be had in Texas at figures considerably

lower than the same material is obtainable in the East. This is to be had from Texas at less than in the East for the reason that the haul to Beaumont is shorter than it is to the East.

The material lost in the process of conversion of pig iron or molten metal into steel plates is usually estimated at 10 per cent. With this high-grade material it should be less. At all events, is is certainly a very conservative estimate.

The labor and maintenance cost of the conversion of iron into steel ran from $6 to $9 per ton in the years 1912–1914 and part of 1915, these figures making an average of $7.50 per ton. War conditions have added not above 70 per cent to labor and maintenance conversion cost.

However, allowing doubled cost for labor and maintenance conversion cost, then—

The cost for converting the pig iron or hot metal into steel plates would be, per ton	$15.00
Adding to this the stated cost of pig iron or hot metal, per ton	15.90
Total cost of material and conversion into steel	30.90
Deducting the usual conversion loss of 10 per cent, as hereinabove estimated, we have left 1,800 pounds of steel, which has cost $30.90, which makes the cost of steel plates, per ton	34.33
The present prices as fixed by the Government is $65 per ton, leaving a difference in favor of Beaumont over the Government price of	30.67

In the statement next above given, the figures are indisputably safe and conservative.

Mr. W. C. Ratcliffe, metallurgist and blast-furnace operator, who has had experience for a number of years operating in Nova Scotia, Illinois, Indiana, Pennsylvania, Colorado, Alabama, and Tennessee, at the request of the Texas Steel Co., made a detailed examination of the figures and prices herein next above given you, and his report to our company considerably increases the advantages to the Beaumont production in his showing that the figures which I have set out before you as elements of cost at Beaumont are rather higher than they should be. He reduces the item I have hereinabove stated for "iron ore delivered at the plant (Beaumont) $2.75 gross ton," or "two tons of ore at $2.75 per ton, $5.50," to $1.83 per gross ton for the iron ore delivered, or making it safe and conservative, as he says, he substitutes $4 for my $5.50 as the cost of the "two tons of ore" to make a ton of steel. Again, he estimates that my $2 per ton for the labor, cost, and plant maintenance is too large and he fixes it at $1.63.

On my figures for coking coal he also makes quite a reduction, and on limestone he says that the price of it delivered at Beaumont is about 5 cents per ton less than at Philadelphia, whereas in my figures I have it estimated higher than at Philadelphia.

On the whole, Mr. Ratcliffe concludes his report by saying that his careful examination brings him to the conclusion that the cost of steel plates at Beaumont would be about $27 and that after an addition of 33⅓ per cent for contingent and profit fund was added, it would yet bring the cost, with profits, of a ton of steel plates to about $36, which is even $9.77 below our figures of $45.77 for making steel, as contained in our proposition to the Shipping Board.

The disclosures that have been made before this committee with reference to the effect of the labor condition upon the work of the shipyards of the East has been sufficient to point to the importance of that item of a shipyard organization. Upon this question we are especially happy down in my country; in the neighborhood of Beaumont and in Texas generally, the supply of labor of a general class is abundant. There has been no exacting overdemand in our country and there has been no great drain upon its supply. This applies to the laboring man of ordinary qualifications generally. Further than this, it is easily stated that steel workers also can be found in abundance in our country. It is stated upon good authority and seems to be a patent fact that every man who has become in any way expert as a boiler maker, bridge builder, steel-structure man, oil-tank builder, is easily converted into a steel-ship worker. We have a multitude of that kind of expert steel builders in our country. We therefore feel that the labor question in a shipyard at Beaumont would be an easy question and quite the opposition and contradiction of the situation that is found with regard to labor in the eastern shipyards. The matter of providing homes and houses for a sufficient force of laborers, both

common and experts, at the shipyards of the Texas Steel Co. would be one of little or no difficulty.

I feel justified in saying, therefore, that this all-important question of labor is one that would give us considerable advantage over labor conditions now prevailing in the shipyards in the vicinity of Philadelphia and of other eastern shipyards. I have been told by most responsible parties fully advised of the facts in the case that the shipyards of Beaumont for building wooden ships have found no trouble whatsoever in providing a sufficiency of labor. Recently, in speeding up the rehabilitation of the Rusk furnace and pipe plant and other properties belonging thereto which our company has lately acquired from the State of Texas, the question of a supply of labor needed came up and assurances were given us that any quantity of laborers that we would need could be easily and promptly supplied both at Rusk and Beaumont. Our labor requirements up to the present time have been filled without difficulty. I feel secure, therefore, in the statement that I have made to you concerning the easy labor situation in that section of the country from which the Texas Steel Co. will have to draw its supply of labor. I feel no solicitude whatsoever on that ground when addressing myself even to the consideration of such a large shipyard at Beaumont as we contemplate building, costing, as we estimate, many millions of dollars. The completion of cantonment construction and aviation buildings in that section which is now nearing its finality, will itself release several thousand competent mechanics in our section.

In submitting the proposition of the Texas Steel Co. to the United States Shipping Board we have stated that we could begin the actual laying of the keels of ships—that is, the actual shipbuilding—within seven months of the time of closing with the Shipping Board and the date of the contract. It, therefore, is shown, if this is conceded, that had we obtained a contract at the time of our first application, to wit, about June 1, we would have had the keel of a ship laid before this date.

At the time the statement was first made that we could begin the actual shipbuilding within seven months from the date of a contract with the Government we had a definite agreement with one of the most responsible shipbuilding concerns in the United States to undertake the shipbuilding end of this proposition. We were to produce the steel plates and other steel for shipbuilding; they were to build the ships at our yard at Beaumont, Tex. They were ready and agreed to begin to lay the keel for the first ship within four months from the date of the signing of the contract. Being unable to close this contract with the Shipping Board at our prices and on our terms, this shipbuilding company is now engaged in building ships for prices at a considerable advance over our figures; consequently, they are not available to us at this time, but we have another concern in view with whom we will be able to make contract.

I have heretofore stated generally the proposition of our company to the Shipping Board for steel making and steel-ship building—that is to say, I have stated the prices at which we propose to make steel and build steel ships for the Government, these prices being considerably below the prices now allowed in the contracts let by the Shipping Board. Coupled with that statement, I suggested that there was another feature of the contract that I was seeking from the Shipping Board with reference to selling to the Government raw material for the manufacture of steel. That feature of the contract, stated in figures and exact language, was this:

We propose selling to the Government 20,000,000 tons of Texas iron ore, 15,000,000 tons of Alabama coking coal, and 10,000,000 tons of Texas limestone for $14,000,000. These quantities of the materials named coordinate to make pig iron and steel. The material mentioned was, and is, worth from twenty-eight to thirty million dollars in the markets to-day and was of this value at the time of the beginning of this war. Our proposition goes further, to offer: That, in making steel plates and shapes and building steel ships for the Government, we are to take back from the Government, if the Government so requires or desires, this same raw material we propose selling to it, as we need the same for steel-plate making and steel-ship building, paying to the Government 50 per cent advance price over what the Government pays us for the same, and with this material to make steel plates for $45.77 and to build steel ships at $140 per dead-weight ton, as hereinbefore stated.

The Texas Steel Co. first submitted to the Emergency Fleet Corporation of the United States Shipping Board our proposition for supplying the Government with these amounts of raw materials for producing steel, and for steel making

and steel-ship building about June 1, 1917, in a written communication to Maj. Gen. George W. Goethals, general manager of the Emergency Fleet Corporation. That some proposition was repeatedly submitted to the United States Shipping Board in a number of communications thereafter, among them, naming here, August 16, 1917, to which Mr. Edward N. Hurley, chairman, replied on August 21, and again was submitted on August 28, August 30, September 2, and October 10, with another reply from Mr. Hurley on October 11, and again on October 23, with another reply from Mr. Hurley on October 24, all of these replies denying our application for an agreement and contract with the Government, as failing to see merit in our proposition. In these several replies from Mr. Hurley, we were variously referred to that branch of the Shipping Board known as the Emergency Fleet Corporation, and by the Emergency Fleet Corporation to the advisory board of the Council of National Defense—that is to say, to the commissioner of minerals, metals, etc.—and we had many communications from these subordinate bodies likewise denying consideration of the proposition as submitted with a final communication from Mr. D. H. Hardy, the attorney of the Texas Steel Co. under date of December 15, 1917, to Chairman Hurley and his reply thereto of December 18, 1917, to the same effect as all other replies denying consideration of the proposition involving the matter of selling the raw material to the Shipping Board or to the Government. In several of these various written communications we asked for personal conferences to adjust any matters that might be in the way of good judgment in arriving at agreements on the proposition, but we were never invited to a conference by the board or any of the subordinate organizations.

The facts and the record of the Emergency Fleet Corporation show that the Shipping Board has agreed to furnish about $21,000,000 for the erection and completing of the shipyards of the American International Corporation, located at Hog Island, Pa. The statement is in the record of the testimony taken before this committee that the only thing the American International Corporation furnished were the flatlands at Hog Island, where the shipyards are located and the "know how." It can be stated upon very good authority that there is much doubt as to the American International Corporation possessing the "know how." In truth and in fact, that corporation has to go out into the markets of the country and employ experts for putting together the shapes and plates that go to constitute the actual ship built after those plates and shapes have been assembled from various manufacturers, whom they have previously employed to make for them such shapes and plates under specifications prescribed by the expert authorities of the Emergency Fleet Corporation.

We invite the special consideration of this honorable committee to a comparison of the proposition and offers that have been made to the United States Shipping Board for a contract by the Texas Steel Co. and the contract with its terms and conditions as let by the Shipping Board to the American International Corporation. We further invite a comparison by this honorable committee between the proposition and proposals of our company and the contract between the United States Shipping Board and the Submarine Boat Co., whose yards are at Newark, N. J.; and we also invite the same comparison with the contract from the United States Shipping Board to the Merchants' Shipbuilding Corporation, with yards at Bristol, Pa.

The testimony that has been adduced before your committee, Mr. Chairman, from the records of the United States Shipping Board and the Emergency Fleet Corporation show that the money necessary for the erection and establishment of these shipyards is furnished by the United States Shipping Board. As stated, the amount furnished and to be furnished to the Hog Island yard is $21,000,000, the amount furnished and to be furnished to the Newark yard is $———, and the amount furnished and to be furnished to the Bristol yard is $———. In addition to these sums the Shipping Board is now asking for an additional sum of $35,000,000 for housing the workmen at these shipyards.

Under these circumstances, we submit that we would have been within the bounds, terms, and conditions of any and all of these contracts if the Shipping Board had seen fit to accept our proposition and take over for the Government these millions of raw material and pay to us the sum we ask for the erection and completion of our shipyard at Beaumont, Tex. I frankly state to the committee that we have been utterly unable to comprehend the differentiation that the Shipping Board has seen fit to make between our proposals and the contracts entered into, especially in these three cases mentioned. In those cases there is no security whatsoever, as we understand it, furnished to the Government for these millions freely advanced to these corporations for the erection and com-

pletion of their shipyards, while we offer to the Government the coordinating material for making steel in quantities of the cash market value of more than double the price we are asking from the Government and declaring in our proposition, as a condition, that the sum of money to be paid to us by the Government in payment of this raw material is to be devoted exclusively to such erection and completion of such shipyard for making steel (exclusively for the Government, if need be) at $45.77 per ton as against $65 per ton that the Shipping Board is paying to other concerns and for building steel ships for the Government (exclusively, if necessary) at $140 per dead-weight ton, whereas the contract with these three concerns mentioned, as shown by the record averaged above $166 per dead-weight ton.

Concerning the properties and facilities for shipbuilding and steel-plate making of the Texas Steel Co., I beg to submit the following facts:

Our companies own about 30,000 acres of iron ore, located in Marion, Morris, Cass, and Upshur Counties, Tex., and about 4,000 acres in Cherokee County, Tex. The titles to these lands have been passed upon by competent attorneys and pronounced perfect, and of these Marion, Morris, Cass, and Upshur County lands our companies own about 7,000 acres in absolute fee simple, and they own the ore and mineral rights in all the others of these bodies, in perpetuity without condition, or limitation, or royalties. These lands have been test-pitted and examined by metallurgists and mining engineers of established reputaton, and the quantity of ore tonnage in them has been variously estimated by these experts at from not less than 60,000,000 to as high as 100,000,000 tons. The chemical analyses made likewise by the most proficient experts have shown that these ores run from 45 to 60 per cent metallic contents, and that the average runs slightly above 52 per cent of metallic contents for the whole acreage named. The 4,000 acres in Cherokee County, most of which was obtained from the State of Texas, in the purchase of the State's iron foundry, is estimated as averaging about 47 per cent metallic contents. These figures are submitted from the reports of mining engineers and metallurgists and chemists, as above stated. These authorities are, among others, Mr. R. N. Dickman, of Chicago, who made his examinations in 1909 and 1910 for and at the instance of the president of the Atchison, Topeka & Santa Fe Railroad Co.; also by Mr. W. C. Ratcliffe, whom I have mentioned hereinbefore in making statement concerning the relative prices of iron and steel at Philadelphia and Beaumont; also by Mr. Charles Catlett, of Staunton, Va., a mining engineer and chemist of national reputation, for 14 years with the Carnegie people; also by Mr. James Niblett, a practical mining engineer of Texas of long experience.

The companies have purchased 6,000 acres of coal lands in Tuscaloosa County, Ala., extending from Duncanville, 16 miles from Tuscaloosa on the Big Sandy Creek, to Coaling, and is located on the Alabama Great Southern Railroad. These holdings are pronounced by Dr. George Little, of Alabama, former State geologist of Mississippi and later of Georgia, to contain 78,000,000 tons of coal. The companies own these lands in fee-simple title.

The limestone holdings are situated in the State of Texas, and analyzed from 95 to 98 per cent pure and are, conservatively, double in quantity the amount offered to the Government in the proposition and proposals hereinabove mentioned as having been submitted to the Shipping Board.

All of this material, being the coordinating material for the making of pig iron and steel, are easily assemblable at our plant site at Beaumont, Tex. Our company has built 30 miles of railroad, connecting the above-described ore fields in Marion, Morris, Cass, and Upshur Counties with the trunk line of the Gulf, Colorado & Santa Fe Railroad running into Beaumont. Our coal fields are connected with the plant site at Beaumont by water route, composed of the Big Warrior River in Alabama to Mobile; thence by two routes to Beaumont, the one being around through the Gulf of Mexico and the other being by the Intercostal Canal via New Orleans to Beaumont and thence up the Neches River to the plant site, a few miles distant. Our limestone fields in the State of Texas are connected by old established trunk lines of railroad.

The companies' plant site at tidewater, Riverside, fronting on the Neches River, adjoining the city of Beaumont on the north, consists of 266 acres and is negotiating for 140 acres in addition. This plant site fronts about three-quarters of a mile on the river, running back inland for its body. The river has a depth of 20 feet in front of our site on down as far as the city of Beaumont, where it reaches a depth of 26 feet, which continues on out into the Gulf of Mexico through the pass.

The company has recently acquired what is known as the Rusk foundry, known as the State iron foundry, heretofore belonging to the State penitentiary system. This property embraces 120 acres of land with improvements, which includes a blast furnace and pipe factory, electric-light plant, residence buildings, and also water rights and switching and trackage rights over the State railroad running through the property and terminals property. With this property also was acquired all of the mineral rights belonging to said penitentiary system, which consisted of the mineral properties in the 4,000 acres of land hereinabove mentioned as being in Cherokee County.

In communications heretofore made to members of this honorable committee it has been stated that the Texas Steel Co. holds that there is no justification for the high prices which are being now paid for manufactured steel and the building of steel ships. The company maintains and reaffirms that statement. The public generally, and especially the members of this honorable committee, are well informed as to the prices of steel-ship building, both in England and in the United States, before the beginning of this war, that steel-ship building in England was done at $40 per dead-weight ton and in the United States for from $50 to $60 per dead-weight ton, and that at times when steel was selling in the markets here at from $23 to $26 per ton. The chairman of the United States Shipping Board was, and is, fully advised of these prewar prices for steel-ship building, both in England and in the United States. His justifications for the enormous increase since the advent of the war, and especially since the United States was forced into this war, has seemed to be ascribed to the increased price of labor and to the cost of transportation. It is an exaggeration of that advance to say that labor has advanced as much as 70 per cent. It certainly is an exaggeration to say that the difficulties of transportation, when added to the advance of 70 per cent for labor, are sufficient to justify the increase for steel-ship building in this country from $50 per dead-weight ton to prices ranging from $166 to over $200 per dead-weight ton, such as are being paid now for shipbuilding for the United States Government.

I wish here to make a part of my statement upon this subject what has been heretofore publicly said by the distinguished chairman of this honorable committee. In an interview reported in the Washington Times of October 31, 1917, you said, Mr. Chairman:

"Had the shipping legislation been passed in 1913 when I first urged it, we could have built steel ships and had them finished now and in operation, and they would have cost us $45 a ton. Companies were ready to sign up contracts at that figure."

I am personally cognizant of the correctness of your statement, Mr. Chairman. I further wish to quote a statement from the Hon. Rufus Hardy, Member of the House of Representatives from Texas and a member of the Committee on the Merchant Marine and Fisheries of the House and chairman of the Committee on Expenditures in the Navy Department. On July 14, 1917, in the House of Representatives, Judge Hardy says:

"Prior to August, 1914, ships were generally built, so the testimony showed before our Committee on Merchant Marine, in England at about $40 per ton and in this country at from $40 to $60 per ton; and the shipbuilders here professed that if they had a large quantity of ships to build they could do it at least, if the ships were standardized, as cheaply as England could. Now they are to be given a quantity of building, and that in the main to be standardized, far greater than ever England's shipyards built; and yet * * * contracts to-day are being made with them to pay a price four times the English ante-bellum price and three times the American ante-bellum price."

Judge William Denman, former and first chairman of the United States Shipping Board, said, as is reported in the Congressional Record of August 15, 1917, as a part of a speech by Senator Phelan:

"We were reliably advised that England was constructing merchant vessels of this type on a double-shift speed-up program at a total cost of under $80 per dead-weight ton with steel at 3 cents per pound."

Three cents per pound is, of course, $60 per ton for steel.

It is true that His Excellency the President of the United States has fixed the price of steel at $65 per ton. It is a fact that immediately afer the United States declared a state of war between the German Government and ourselves steel sold at from $140 to $180 per ton. The price was fixed between the eastern steel owners and Maj. Gen. Goethals at $96.50 per ton. At that time the eastern iron-ore holders were demanding a price around $130 per ton for steel. It was then that the President cut the price to $65. His reasons for cutting to

$65 only, no doubt, were politic and diplomatic. A world of dangers were around him and on his hands—dangers from without and dangers from within. It may have been political wisdom for the President at the time to stop at $65, wherein it may be said that the President was conservative, fighting some and yielding some. Nevertheless, the patent, indisputable facts show that at $65 per ton there was around about $30 per ton above cost. There are very few elements entering into the cost of steel production—the cost of steel. They are the ore in the ground, the cost of labor for mining, the cost of mining machinery or capitalization, and the cost of transportation. As I have heretofore stated, a 70 per cent increase on the cost of labor is a liberal allowance for that which has gone to labor. The cost of mining machinery has advanced negligibly. The cost of transportation has advanced not exceeding 15 per cent, if that much. Throwing all of these elements together and their increase of cost, it becomes a case proven that there is no semblance of justice in the claim that the enormous increase in the price demanded for steel at this time is reasonable or right. The one and inevitable conclusion is that the advance of price is due solely to the demand and greed of the owner of the raw material in the ground.

Arguments are made to the effect that should prices be cut below that fixed by the Government small dealers will be injured, if not shut out of the business; that is to say, if prices paid for steel are reduced. The answer that I have herein above given is the answer to that; that is, that such a condition affecting the small dealer is due to the fact that he is dependent upon the owner of the raw material, who charges excessive prices for it. All the other elements of making steel are the same to the small manufacturer as they are to the large manufacturer. It is only at the point where he is to obtain his material and pay excessive prices for it that is determined the necessity for higher prices paid to him to enable him to continue business. In other words, the argument is to pay the monopolist of raw material excessive prices in order to keep from running the small manufacturer out of the business.

It seems that it ought to be an easy conclusion, and to my mind it is an easy conclusion, Mr. Chairman, that the ownership of the raw material is the standpoint from which the price of its products are controlled. One of the impelling motives that has been a part of my proposals and proposition submitted to the United States Shipping Board, as I have described them to you, is, and was, placing in the hands of the Government of the United States such a quantity of this raw material as will enable it to have economic control over the price of steel. The quantity that our proposition submits for sale to the United States is sufficient to build 3,000 steel ships of 7,500 dead-weight tons each and leave 2,760,000 tons of steel, or, expressed in another way, it is sufficient quantity to build 2,000 merchant-marine ships of 6,000 dead-weight tons' capacity each, and then to provide material for armor plating the Navy, together with the steel for ordnance and munitions, to the extent of 200,000 tons a year for 10 years, and leave, by mathematical calculation, sufficient material out of this quantity of our offer to the Shipping Board to produce the necessary steel rails to build a trunk-line railroad across the continent from the Atlantic to the Pacific, and one from Winnipeg south to the Panama Canal, together with 200 miles to each State of the Union for tributary railroad feeders to said trunk lines.

I am stating the matter in this form simply as a concrete presentation of the power and force in the quantity of material contained in our offer coupled with our proposition to the Shipping Board. As I have heretofore stated, the mining engineers estimate that in our holdings we have from 60 to 100 million tons of this iron ore. The whole of it is at the command and service of the United States Government. And even if the United States Government only owns those quantities which we have embraced in our proposition to the United States Shipping Board, that would enable the Government to control steel prices throughout the United States and to level and stabilize them, and thereby save a billion dollars to all the people of this country alone through their industrial uses and employments of iron and steel.

The CHAIRMAN. Gentlemen, Dr. Godfrey is present and wishes to present some views to the committee on the subject of housing for employees of shipyards, and we can now hear him in executive session.

(Thereupon, at 3.45 o'clock p. m. the committee proceeded to the consideration of executive business, and at 4.45 o'clock p. m. adjourned to meet at 2 o'clock p. m. Friday, January 11, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, JANUARY 11, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, Nelson, Jones, Harding, Fernald, and Johnson.

STATEMENT OF MR. OTTO M. EIDLITZ, CIVIL ENGINEER AND BUILDER, NEW YORK CITY.

The CHAIRMAN. What has been your experience in your profession, Mr. Eidlitz?

Mr. EIDLITZ. Our firm—my father before me, and since his death I and my brother—have conducted a large building business for about 65 years now. It was founded in 1854, and we have constructed some of the most important buildings in New York. We confined most of our operations to New York; buildings, such as all kinds of homes and residences and about 28 or 30 of the largest financial institutions in the country; we at present have somewhere between $10,000,000 and $15,000,000 worth of work in hand.

The CHAIRMAN. Are you connected in any way with any of the committees—the advisory council or any of the committees associated with the Council of National Defense?

Mr. EIDLITZ. Yes, sir; I came here through them.

The CHAIRMAN. What is your relation with them?

Mr. EIDLITZ. About three months ago I was sent for by Mr. Willard, or, rather, at the request or suggestion of Mr. Willard to Secretary Baker to conduct a hearing as to the housing situation of industrial workers throughout the country.

That was a committee of five that was appointed by the Secretary of War at the request of the advisory commission of the Council of National Defense, of which Mr. Willard was chairman. That hearing was conducted, and a report was handed in by my committee, by myself acting as chairman, the other members of the committee being Mr. Spencer, of the United Building Trades; Mr. Robinson, vice president of the Illinois Steel Co.; Mr. Dubois, the comptroller of the New York Telephone Co.; and Mrs. Easley, of the National Civic Federation.

That committee, consisting of those five persons, conducted hearings, and on October 31 reported to the Council of National Defense,

stating that we did find a very serious shortage of houses for industrial workers in various localities.

The committee recommended, first of all, that in future all contracts that were placed should contain a clause providing for the housing of workers, to try to take care of the excess labor being drawn into certain localities, by the large number of enormous contracts to be given out in certain localities, and the consequent shifting of large masses of labor to those particular localities where they were needed.

We found in a great many communities, or quite a number of communities, there was a very serious shortage of houses.

The CHAIRMAN. Did your committee make any inspection or investigation as to the various communities, or did you simply sit here in Washington and have people come in and tell you about the conditions?

Mr. EIDLITZ. Mr. Hiss, who is present, conducted a personal canvass throughout the country; and Mr. Hiss's committee brought the facts first to the attention of the Council of National Defense. And he can, perhaps, state the whole details of that better than I can, because I only came in about three months ago, and he was engaged in the work for a longer time than that.

Our committee reported, in order to handle the subject, a committee of seven should be appointed, consisting of three laymen, and a representative of the Navy, and one from the Army, the Shipping Board, and a representative of labor, to handle the work of erection of buildings for the Government, acting as trustee, in the various localities where buildings were needed, and where the communities, after proper inspection, proved their right to relief.

And we asked that $20,000,000 be made available from the President's fund, in view of the fact that both the Army and the Navy stated that they did not see where the fund could come from.

We saw the President and we saw the Council of National Defense. The result of that was, on November 10, a meeting was held in the office of the Director of the Council of National Defense, Mr. Gifford, at which were present the heads of the various departments of Government and myself.

It was there decided, in view of the fact that the funds of the President did not seem available at that time, that an effort should be made to secure relief from existing acts of Congress which had been passed prior to that time, or from augmenting contracts already in existence. In other words, the difficulty was with the contracts that had already been placed in certain localities, and had congested those localities; in future contracts, it was thought that that could be provided for by providing a housing appropriation right in the contract, the same as they provide an amount for extension of plant, in many of those contracts that they are giving out for war materials.

Senator JONES. Did you say that it appeared that the President's fund was not available?

Mr. EIDLITZ. Well, we could only judge of that, because our proposition was not acted on.

Senator JONES. That is, you concluded by that that it was not available?

Mr. EIDLITZ. Yes; that is all.

Senator JONES. Well, you are aware of the fact that now that, out of the $100,000,000 that was made available to the President, only about $20,000,000 or $30,000,000 was expended?

Mr. EIDLITZ. Well, we, of course, being laymen, did not know the details of that. We made our recommendation on the basis of the testimony which clearly indicated that that was the only fund which we could see that would be immediately available; and we thought that if we could get that $20,000,000, it would enable us to make a start in the very seriously congested centers.

Senator JONES. And you concluded, because you did not get that, that it was not available?

Mr. EIDLITZ. That it was not available—and from the direction of the Secretary of War that an effort should be made to secure relief from existing acts passed prior to this time, or through additions to existing contracts. That was his recommendation, to see whether that could not be done. And all the heads of departments were at that meeting of November 10, in Mr. Gifford's office; and the concensus of that meeting was that it probably would be proper to get it in that way.

Senator JONES. Did any of the heads of departments suggest that the President did not have the funds available?

Mr. EIDLITZ. No; there was no discussion of that at all.

Senator JONES. They did not even say that he did have the money available?

Mr. EIDLITZ. No; they simply notified us that that was the line of endeavor that should be carried out; and like good soldiers, we tried to do it in that way.

Senator NELSON. At what yards in the country is housing needed the most?

Mr. EIDLITZ. Why, in a great many places, of course. We investigated that.

Senator NELSON. Have you a list of the places where housing is needed?

Mr. EIDLITZ. Oh, yes; we have a number of lists.

Senator NELSON. It is not needed at our yards?

Mr. EIDLITZ. Oh, no.

Senator NELSON. What is the difficulty that you found about houses? Can they not be rented?

Mr. EIDLITZ. No, sir. The difficulty is this: Take, for example, the city of Bridgeport. At the present time the city of Bridgeport, although the situation there has changed somewhat from that of a month ago, due to the fact that the Russian contracts are being held up now—but even with that, the city of Bridgeport needed and needs at the present time, 5,000 or 6,000 additional workers; and it needed before this stoppage of the Russian contracts, about 10,000 additional workers; and there are absolutely no houses in Bridgeport to accommodate those men.

Senator NELSON. Where have they been living, while they were working on the Russian contracts?

Mr. EIDLITZ. Well, it was outside of those Russian contracts that they needed 10,000 men.

Senator NELSON. It was outside of that?

Mr. EIDLITZ. Yes; outside of that. Now, the fact that they have stopped on the Russian contracts will produce a temporary easing of the situation, for a short while.

Senator NELSON. You mean that we can get some of those men that were working on those contracts?

Mr. EIDLITZ. Yes; we can get some of those men. But the bulk of those men are not the kind of men that are wanted on certain of this new munition work that is now starting at several of the new plants which are to do Government work at the present time.

Senator NELSON. But that refers to munitions?

Mr. EIDLITZ. Yes; that refers to munitions.

Senator NELSON. And not to shipbuilding; I was referring to the workers in the shipyards.

Mr. EIDLITZ. You were asking about the workers in shipyards. All right, I will give you the shipbuilding plants where housing facilities are needed. One of the first cases that we had before us was the Sparrows Point yard, in Maryland—the yard of the Bethlehem Steel Co. Their condition was such——

Senator NELSON (interposing). That is an old-established yard, is it not?

Mr. EIDLITZ (continuing). Their condition was such that practically one-half of their plant for shipbuilding was standing idle.

Senator NELSON. For lack of material?

Mr. EIDLITZ. For lack of men. They agreed that they could produce one and one-half ships per month additional if they had the 3,500 men, and——

Senator NELSON (interposing). Could they get the men, even if they had the houses?

Mr. EIDLITZ. Yes.

Senator NELSON. Where could they get them from?

Mr. EIDLITZ. Well, to exemplify that, they had during the eight months prior to the time they came before us—they employed 18,000 men—they actually put to work 11,000 men, imported, to increase their shipbuilding force which they had going at the time by 400 men.

Senator NELSON. Well, they were carrying on some other industry then besides shipbuilding?

Mr. EIDLITZ. Oh, yes; but they had——

Senator NELSON (interposing). What other industry were they carrying on alongside of the shipbuilding?

Mr. EIDLITZ. Well, they have other industries besides shipbuilding at that point, you understand.

Senator NELSON. Well, they do not give a preference to housing for the workmen on those other industries besides shipbuilding, do they?

Mr. EIDLITZ. If you will allow me to explain, they had a contract with the Government to produce a certain number of vessels in a certain time. They were perfectly able to do that, because they took no more contracts than they had the capacity to deliver. The situation we found was simply that one-half of an absolutely equipped shipbuilding plant was not operated because they could not keep the labor in that vicinity; they had housing in Baltimore, which meant a run of an hour and a half or more each day each way, with the result that, even though a man might like the wages and might like

the work and all that, they could not hold the men. As I say, they had 11,000 men employed to get 400.

Senator NELSON. Well, what other points are there where housing facilities for workers in shipyards are the most needed?

Mr. EIDLITZ. There are the shipbuilding plant at Wilmington, Del.—Pusey & Jones and Harlan & Hollingsworth—they were affected very nearly 50 per cent.

Senator NELSON. Well, that is near the heart of a big city, the Pusey & Jones plant, is it not? I do not know about the other plant.

Mr. EIDLITZ. They both are.

Senator NELSON. Well, it strikes me that there ought to be house room there within a reasonable distance of the yards.

Mr. EIDLITZ. Well, there was not. Of course, you realize that that whole district there has been tremendously increased, in an industrial way, within the last six or seven months.

Senator NELSON. Yes.

Mr. EIDLITZ. Camden, Hog Island, Philadelphia, the Chester Shipbuilding Co., the Cramps Shipbuilding Yard at Philadelphia, and various big chemical plants, and other large plants that are actively producing, directly or indirectly, war materials for the Government—with the result that all the available labor that could be brought in or could be housed there has been absorbed, and these men are absolutely without the necessary labor, due to the fact that they have not the houses for them. At least, that was a very serious part of the difficulty.

Senator NELSON. Well, are not most of the laborers there engaged in other industries outside of the shipbuilding industry?

Mr. EIDLITZ. I suppose there are quite a number engaged in other industries besides shipbuilding; of course they are.

The CHAIRMAN. Well, your plan contemplates the Government undertaking this housing of workmen, not only adjacent to shipyards and for the benefit of shipyards, but also for all other war industries?

Mr. EIDLITZ. Oh, no; only those localities where the locality proves that the output of war products is being restricted sufficiently—in a sufficient percentage to entitle it to consideration.

The CHAIRMAN. What is your idea about how the Government ought to undertake that? What kind of houses ought the Government to build, and on what kind of terms, and to what extent ought the Government to go in building those houses?

Mr. EIDLITZ. Well, those houses, of course, will vary in cost. The average house of that kind varies anywhere in cost from $2,000 to $3,500, according to who is to occupy it. The kind proposed was, in order not to make this proposition of the Government passing out funds to build homes too broad, that in those localities where this shortage really was definitely proved a loan should be made to that locality, an 80 per cent loan, perhaps, at 4 per cent, for 15 years, with a proper amortization scheme and a limited dividend, so that the worker would get the benefit of the large loans, at a low rate for a long term of years. In other words, the whole object of this proposition was to secure homes—proper homes—in order to get efficient workers to do this war work. And in view of the fact that many of these contracts that are given out are cost-plus contracts we felt very

sure that the cost of the product would be tremendously affected by efficient labor, thus reducing the turnover by keeping the labor contented and reasonably housed. There was no idea of doing anything wonderful; the idea was to make an intelligent development.

Senator NELSON. But do you not think that, for example, where a married man having children lives in a certain town, it is pretty hard to get him to go off to a shipyard some distance away and live where there would probably be no school facilities for his children?

Mr. EIDLITZ. That is quite true.

Senator NELSON. Well, you do not expect them to move, do you?

Mr. EIDLITZ. Well, we did; it would depend altogether on where the trouble occurred. For instance, at Newport News—this is not the order in which I wished to make my statement, but I want to give you the facts in just the way you want them.

The Shippink Board took up this question about three weeks after Secretary Baker appointed me a committee of one to advise with the various departments—the Shipping Board took this question up and gave me certain appropriations for housing, first, at Hog Island, where 30,000 workers are going to be employed.

Senator NELSON. Have they started the work of building houses there?

Mr. EIDLITZ. Well, they are getting the plans ready for doing so.

Senator NELSON. They have not told us about that; you are the first one that has told us that they had already gone to work before we started this investigation.

Senator JONES. There has been lots of complaint with regard to that delay in providing for houses at Newport News, and they did not do anything about that until a few days ago.

The CHAIRMAN. The situation with regard to Hog Island is very serious; the situation there also involves the question of transportation.

Mr. EIDLITZ. Yes; it is a very, very serious condition at Hog Island; it is a very difficult situation. You see, the plant was located——

Senator NELSON (interposing). In a swamp.

Mr. EIDLITZ. Yes; on account of being on a very large waterway. For a yard it is an ideal situation; but the immediate surroundings are not so ideal.

Senator NELSON. Well, do you propose to have the workmen located and housed in that swamp?

Mr. EIDLITZ. No, sir.

Senator NELSON. You will have to have them at some distance from the yard, or else the people will be made sick by living in that swampy region?

Mr. EIDLITZ. That is going to be taken care of, sir. Now, at Newport News——

Senator NELSON (interposing). How far is that Hog Island yard from Philadelphia?

Mr. EIDLITZ. About 3 miles.

Mr. HISS. It is about 6 miles.

Mr. EIDLITZ. It is about 3 miles from the nearest point.

Mr. HISS. It is about 7 miles from the point where housing can be obtained.

Senator NELSON. It is on the other side of the river, is it not?

Mr. EIDLITZ. No; it is on this side.

Senator NELSON. Is it on the same side as Philadelphia?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. Is it between Philadelphia and the Cramps' yard?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. How far is it from the Cramps yard?

Mr. EIDLITZ. Cramps' yards is on the other side of the river.

Mr. HISS. Senator Nelson, it is at that angle of the two rivers, just like that [indicating]; it is right in the angle formed by the Schuylkill and the Delaware Rivers.

Senator NELSON. Right in that angle of the two rivers?

Mr. HISS. Yes, sir.

Senator NELSON. And the Cramps' yard is below that?

Mr. HISS. Yes, sir; on the river.

Senator NELSON. The Cramps Co. have built housing for their men, have they not?

Mr. EIDLITZ. The Cramps were one of the few concerns that felt that they had ample housing to take care of all the men they needed.

Of course, in most of these cases, we got reports from the district officers of the Emergency Fleet Corporation, besides making inspections through other methods.

Senator NELSON. Of course, I can see that; where you go into a no-man's-land, in a swampy region, and locate a shipyard where there has been nothing whatever before—I can see that it will be very difficult to get men to work there. But, then, they are building no ships there, and probably will not be this year.

Mr. HISS. They are laying the keels this year.

Senator NELSON. They are just building up the shipyard and grading up the marsh there.

Mr. EIDLITZ. I think you will find that they will produce ships there this year. But, of course, that is not a think that I have anything to do with.

Senator NELSON. All right. Now, what have you to say in regard to these houses? What kind of houses would you build—wood, or brick, or cement?

Mr. EIDLITZ. That would depend very largely upon what would be available in that locality.

Senator NELSON. Would you take account of the cost of material?

Mr. EIDLITZ. Yes, sir; I would go further than that——

Senator NELSON (interposing). Would you build them as single-family houses?

Mr. EIDLITZ. We would build them of various classes; family houses, in rows, and single buildings.

Senator NELSON. You would not build them on the tenement-house plan?

Mr. EIDLITZ. No; although there may be some of that done, too; also apartments.

Senator NELSON. What kind of cottages would you build? I mean, as to the rooms, the dimensions?

Mr. EIDLITZ. Well, we standardized that; no room less than 10 by 12 feet, except that some of the bedrooms would not be as large as that.

Senator NELSON. For single men you would have to provide boarding places, too, would you not?

Mr. EIDLITZ. Yes; that has been considered also.

The CHAIRMAN. Who would furnish the other 20 per cent of the cost of the houses?

Mr. EIDLITZ. The locality. The plan that I suggested on November 24 was this: I divided the problem into three phases—first, the community problem, where the Army and the Navy, and perhaps the Shipping Board, might all be interested in this proposition. There I suggested that 80 per cent of the money be supplied by the Government, at 4 per cent interest, as I have stated before, for a long term of years, and 20 per cent of the money be provided by the community.

Senator NELSON. By the local interests?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. By the people?

Mr. EIDLITZ. Yes, sir; by the people.

Senator NELSON. Would you have the laboring man invest in them?

Mr. EIDLITZ. No; although the laboring man should have a chance to buy them.

Senator NELSON. You would give them a chance to buy at cost, would you?

Mr. EIDLITZ. Yes; and our whole project was that it should not be considered as a real-estate proposition at all; that it should be considered as a means to an end; and to invite labor into these localities under attractive conditions, so that they would be inclined to go there and work.

Senator NELSON. Will not the real-estate men who own those lands try to hold the Government up for high prices?

Mr. EIDLITZ. Well, we thought we had business ability enough to prevent that.

Senator NELSON. How could you prevent those greedy profiteers from doing that?

Mr. EIDLITZ. How can we prevent those greedy profiteers from doing that?

Senator NELSON. Yes.

Mr. EIDLITZ. Well, if you pass our bill we will prevent it.

The CHAIRMAN. Under the bill you can acquire the land by requisition, if necessary?

Mr. EIDLITZ. Yes. And, as a matter of fact, under the urgent deficiency bill of October 6, 1917, which is now the law, the President has the power, in any place where there is being built a torpedo-boat destroyer, or any accessory of a torpedo-boat destroyer, to take over the property; and that would affect perhaps two-thirds of all these places that we are talking about.

Senator NELSON. Yes?

Mr. EIDLITZ (continuing). Because a torpedo-boat destroyer is not equipped unless it has the necessary engines; and it is not any good unless it has its torpedo flask, and its torpedo, and its guns, etc.; so that without a very great stretch of the imagination that act of Congress could be construed to apply very comprehensively so as to cover, perhaps, nine-tenths of all these localities under discussion, because some of that work for those torpedo-boat destroyers is being done in those various localities.

Senator JONES. Do you know why that is not being done?

Mr. HISS. They have a right to commandeer them, too.

Mr. EIDLITZ. Under that act the President is authorized, up to $225,000,000, to provide facilities for the expeditious production of those torpedo-boat destroyers or their accessories; he has power to commandeer land, and if there is a disagreement as to the value of the land, to pay 75 per cent of the Government appraisal, the other 25 per cent to be adjudicated by the courts.

Senator JONES. Has any of that power been exercised?

Mr. EIDLITZ. No.

Senator JONES. Do you know why not?

Mr. EIDLITZ. No.

Senator JONES. The necessity has existed for a considerable time, has it not?

Mr. EIDLITZ. Yes.

Senator NELSON. There is a matter somewhat akin to this that the committee had presented to it the other day, with regard to the shipyards at Staten Island, N. Y.; the difficulty of securing ferryboats there to take the men over from Brooklyn and New York City to Staten Island; and then there was the difficulty of getting good service on the trolley line along the shore of Staten Island to the different yards and plants, including one on a small adjacent island. The difficulty as to those plants is to get the men over there; it is not the question of housing; there is no question of housing them on Staten Island; but the question is to secure transportation facilities from New York City and Brooklyn.

Mr. EIDLITZ. Many of these problems that we have are similar to that.

Senator NELSON. Have you dealt with that question at all?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. And then the owners of those ferryboats were trying to hold up the Government; their boats were lying idle in the slips and the prices they asked for the rental of the boats was almost equal to what they would be worth on a sale of the boats.

Mr. EIDLITZ. Certainly.

Senator NELSON. And then the trolley line on Staten Island did not give sufficient service. Now, do you not think that that is a situation that demands immediate relief?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. And that those ferryboats ought to be commandeered?

Mr. EIDLITZ. Absolutely so.

Senator NELSON. And that the trolley line ought to be commandeered, or a double track put in?

Mr. EIDLITZ. That is correct.

Senator NELSON. Or four tracks, with plenty of cars on them?

Mr. EIDLITZ. Yes, sir; and that is just what that bill proposes; that is just what that urgent deficiency bill gives the right to do. Staten Island does not come under that category; that is an Emergency Fleet Corporation proposition. They are not building torpedo-boat destroyers there; they are building vessels for the Fleet Corporation.

Senator NELSON. Yes; they are building boats for the Emergency Fleet Corporation. But the ferryboats come under the provisions of

the law. I think the Government has a right to commandeer them or to requisition them.

Mr. EIDLITZ. I do not know as to that, sir. That may be a general law; I do not know as to that. But I do know that in any locality where torpedo-boat destroyers or accessories for destroyers are being fabricated the President and the departments under him have absolute power at this time to do anything they like in that respect.

The CHAIRMAN. There are localities where it is very difficult to get the land within convenient distance of the plant, are there not?

Mr. EIDLITZ. Well, Mr. Chairman, the situation is so acute in many of these places that the land situation and the land-speculation phase of it have not entered into the matter to nearly such a degree as one would usually suppose, because the plants in that neighborhood were so anxious to secure labor that they were perfectly willing to turn over land at reasonable prices; and, as a matter of fact, in almost all these instances they turned the land over and took their chances of getting paid for it at the end of the 15-year period.

Now, the city of Bridgeport made this proposition. They were the original ones that felt the pressure very materially, and they made this proposition: They want to borrow $3,000,000.

Senator NELSON. The city of Bridgeport?

Mr. EIDLITZ. The city of Bridgeport; 20 manufacturers there, all of them engaged in doing Government work; they want to borrow $3,000,000. They offered to give a blanket mortgage on $600,000 worth of improved, occupied real estate. Those 20 concerns agreed to amortize 30 per cent of the land in five years, so that at the end of five years you probably would have, to all intents and purposes, an equivalent of about a 50 per cent mortgage in their property. In other words, you would have a $2,100,000 mortgage on $3,600,000 worth of property.

In the next ten years they would amortize 40 per cent, paying their interest of 4 per cent on their loan continually. At the end of the fifteenth year the local banks would take over the loan, pay the balance to the Government, and the Government would be cleared up in that locality.

They also offered to restrict their income. Those manufacturers who are interested in this housing problem agreed practically to get no dividends for the first five years at all. They agreed to put by each week a certain percentage of their pay rolls to amortize that $900,000 through the first five years. It is absolute A No. 1, first-class real estate proposition.

The trouble we were confronted with was that there seemed to be a question of whether the Government had any power to loan money.

I might say that the Shipping Board, as I understand it, has now taken care of the Sparrows Point proposition for the Bethlehem subsidiary; they have agreed to provide a thousand houses, as we understand it, for the New York Shipbuilding Co. In connection with the——

Senator JONES (interposing). When did you understand that that had been done?

Mr. EIDLITZ. I think that was done yesterday.

Senator JONES. Oh, yes; I see.

Mr. EIDLITZ. It was very recently done. I want to say, however, that I was appointed on the 12th day of November; that the Shipping Board inside of 10 days showed very active interest; that investigations have been carried on covering Newport News, by personal inspection by members of the Shipping Board or the Emergency Fleet Corporation, and reports brought in as to needs—Chester, Pa.; Wilmington, Del.; Hog Island; New port News; Fore River Shipbuilding Co.; Quincy, Mass.

Senator JONES. But where they have been doing this investigating they seem to think that they did not have authority to go on and actually do anything until the last few days. I am glad they have at least become active and are now exercising some of the authority that they actually have.

Mr. EIDLITZ. Well, they are exercising it now. I want to say further that the Army has recently appointed a very energetic representative, Mr. Dorr, of the Assistant Secretary's office; and the Navy Department has appointed Mr. Parsons and Admiral Rousseau, who are collaborating together now. And the only thing which is a vital necessity is that the centralization be brought about to coordinate this situation and operate the plans from a central station, with all of these departments represented there and with full power to act.

Senator NELSON. Well, do you not think, with reference to housing people at those places where they are building ships and making munitions or other war supplies for the Government, that the two departments concerned ought to collaborate and work together under one central authority?

Mr. EIDLITZ. Exactly.

Senator NELSON. The Shipping Board, the War Department, and the Navy Department, where they are all interested?

Mr. EIDLITZ. Exactly; that is just what I think.

Senator NELSON. There ought to be one head for that work——

Mr. EIDLITZ. Yes, sir; you have got it exactly right.

Senator NELSON (continuing). So that whatever they do in the building of houses could be done under one plan?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. And under one head?

Mr. EIDLITZ. Exactly.

The CHAIRMAN. At present, take the Shipping Board, for instance: it has no power to condemn land or acquire it by requisition.

Mr. EIDLITZ. No. But in view of the fact that most of its work is in connection with small communities, and the actual employees of those shipbuilders are a very appreciable part of the whole population, they are in a pretty good position to do something. But it is, as the Senator has suggested, that that is the only reasonable, logical way of doing it: Make one central organization, where all these departments are represented, and make the members of that organization trustees of a fund, and let them decide what is to be done and do it, instead of talking about it.

The CHAIRMAN. You have prepared a bill along those lines, and it has been introduced in the House of Representatives?

Mr. EIDLITZ. Yes, Mr. Chairman; it has not been introduced.

The CHAIRMAN. It has not been introduced?

Mr. EIDLITZ. It has been in the hands of the Secretary of War since December 4.

Senator NELSON. I think that under the bills that have been before this committee we give the President full authority.

The CHAIRMAN. Yes; we have had a bill here on that subject.

Senator NELSON. Yes; we have a bill here, and under that the President would have authority to compel the Shipping Board, the War Department, and the Navy Department to cooperate.

Mr. EIDLITZ. Is that the bill authorizing expenditure of $50,000,000?

The CHAIRMAN. Yes; it is Senate bill 3389, authorizing the Emergency Fleet Corporation to purchase, lease, requisition, or otherwise acquire land, or houses, to construct houses, etc.

Mr. EIDLITZ. Now, the only trouble with that bill is it specifically applies to shipyards.

Senator NELSON. Yes.

Mr. EIDLITZ. Of course, it is a very important measure. But it is too bad that we can not get a comprehensive bill while we are doing it.

The CHAIRMAN. To cover all governmental activities?

Mr. EIDLITZ. Yes; to cover all governmental activities.

Senator NELSON. Including munitions factories?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. Ordnance factories?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. And factories making military supplies?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. Why could we not amend the bill and make it general in its operation?

Senator JONES. That would be important only in those localities where two or three departments of the Government are represented in actual work?

Mr. EIDLITZ. Yes.

Senator NELSON. Well, the authority would be in the hands of the President, and he could limit it to those places?

Mr. EIDLITZ. Yes, sir. I want to say this, that I am quite satisfied, although we have investigated only perhaps a dozen of these cases, that there are unquestionably a number of others that never have been investigated, but who have been calling for help for some time. But in view of the fact that we have not been able to make any real headway on the most pressing ones we simply sidetracked any other calls for help that came from any other direction. Of course it is perfectly useless to keep on investigating when you have not any authority and apparently are not able to raise any funds with which to do anything.

Senator JONES. In other words, while you could reach a conclusion as to what ought to be done, you could not get anybody to do it?

Mr. EIDLITZ. Could not get anybody; no. Now, as I say, in the last two weeks there has been a decided change, and the department that started in first to get busy was the Shipping Board. They realized the situation, and when they found that it was possible under existing conditions they started in and did it.

You understand it is not so easy to go out and create a new development of this kind; you can not do that. It has to be considered carefully and an intelligent development made. The ground has

got to be surveyed. It is easy to say, "Build a hundred houses." But we are not talking about building a hundred houses; we are talking about building 2,000, 5,000, 6,000, and when you get into figures like that, and consider the opening in many instances of new developments 2 or 3 miles away from the main towns, it calls for intelligent study and survey in order that we may not make a botch of it. Furthermore, if our Government is going into this thing either through loans or direct gifts it is of the utmost importance that these developments should be intelligently presented and that we shall at least measure up passably with what our allies have done in France, and particularly in England, where they have spent hundreds of millions while we have been thinking about it.

Senator JONES. Have you gotten any information as to how they have done it?

Mr. EIDLITZ. Certainly.

Senator JONES. Where is that information?

Mr. EIDLITZ. Well, there is a report by Mr. Ackerman, who was sent over by the American Institute of Architects, to make a survey of the situation in Great Britain, which was published from the Octagon here about 10 days ago. Mr. Ackerman came before the Council of National Defense at a meeting at which three of the secretaries were present, and they heard what he had to say. I think he made an impression, and the thing is commencing to have some effect.

Senator JONES. Has anybody else besides Mr. Ackerman made a report on conditions in France and Great Britain, as to how they have been?

Mr. EIDLITZ. Of course there is general literature on that. We were particularly interested in what England had done.

Senator JONES. I should be pleased if you would give the committee information at least as to how we can get the documents.

Mr. EIDLITZ. We will send them to you, sir.

Senator JONES. I should be glad to have them myself. They ought to furnish a pretty good guide for us to act on here, so that we may profit by their experience.

Mr. EIDLITZ. My dear sir, the whole question is, Are we trying to win the war or are we sitting here and thinking about it?

Senator JONES. I think we are thinking about it and talking about it a good deal. It seems to me we ought to be able to learn much from what our allies have done.

Mr. EIDLITZ. When you find that the output of an industry is restricted 50, 40, or even 30 per cent and there is a definite reason, it seems to me you can not get busy fast enough to eradicate that reason. It is not a tremendous proposition; it is a fleabite compared with what England has done, because we are a much larger country, and we have had the advantage for three years of being prepared to some extent, due to the fact that we have been fabricating for our allies. The city of Bridgeport in the last three years has built over 5,000 homes, but in the last year that rate has considerably decreased. Due to the high cost of building, which is brought about by the war emergency, building has practically stopped in all these centers. That has been brought about, first, by the high cost of building and, second, the practical impossibility of getting deliveries.

Senator JONES. I want to ask you especially with reference to the Pacific coast. Did you make any investigations out there?

Mr. EIDLITZ. No. The Pacific coast is not so bad off by any means, nor is the South. It is a question of a hundred houses, or 50 houses, or something like that. Seattle is beginning to be heard from now, but we have not investigated the condition there. From the reports we get from there we believe it is not very serious.

That is the point, the point that relief is not given until its need is demonstrated. Because you lack houses is no reason why you should have them; because congestion existed before is no reason why relief should be given now, unless it is restricting the war output, and then only to that extent. The country's attitude in the beginning was that these various manufacturers had made contracts to produce certain goods in a certain time, and that being the fact it was up to them to produce them. The reason they are not going to produce them or only partially produce them is the fact that our Government made contracts with A, B, and C in a certain locality, and then with E, F, and G in the same locality, and they agreed to do certain things, counting on the labor they could get in that locality.

Senator NELSON. Let me ask you one question right there. When the Shipping Board or the Emergency Feet Corporation was providing for the building of new yards, ought they not have taken into account this question of housing?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. And not located the yards where there was no housing?

Mr. EIDLITZ. Well, I would not say that altogether, sir. There are certain localities where shipyards can be placed; there are other considerations besides housing. But be that as it may, as far as I am concerned, I am not answering for anything that happened up to the time when a demand for housing brought that locality to our attention.

Senator NELSON. No; but in establishing yards in the future would you not say that they ought to be careful to avoid putting the yards where there is no housing for the men?

Mr. EIDLITZ. As a general proposition; yes, sir.

Senator NELSON. And that the question of money ought not to cut any figure?

Mr. EIDLITZ. As a general proposition.

I would like to explain to you this point about Bridgeport, which came up when the Senator put his question. They placed these contracts in Bridgeport, or in any locality, with A, B, and C, and then with E, F, and G, and that locality was well equipped to handle war contracts, for quartermaster's supplies, munitions, and, in some instances, torpedo accessories, etc. They placed a lot of these contracts in that particular locality without consulting A, B, and C, or E, F, and G, or any of the first men that they had been dealing with. Those men were going on merrily with their work, and all of a sudden they found themselves short of men, because all these other contracts were being placed in the same locality and their men were being drawn from their industries. In addition to that, when the Government could not place any more fixed-price contracts they had to make cost-plus contracts in the same locality. You can see what happened; it was simply a case of hell; that is all.

Now, when we, due to a war emergency, create a condition of that kind we must recognize it and come to the relief of that community just as quick as we can. There is no use in saying we have a contract, since you can not make a contract with a man and then change the conditions under which that contract was made; you are responsible for it. But be that as it may, if we are not going to win the war without having the houses, for God's sake let us give them the houses, and get busy about it.

Senator JONES. You say you have been getting some complaints lately about conditions at Seattle—and it is true that is one of the greatest shipbuilding localities of the country now; a number of new yards have been started there. Have you taken any steps to investigate that?

Mr. HISS. Yes; an investigation is going on now through my committee in Seattle.

Senator JONES. What committee is that?

Mr. HISS. The section on housing of the labor committee of the Council of National Defense. We will be able to report very shortly. We just got the first card the other day. I was there myself in July.

Senator JONES. I am glad to know you are investigating that. It is one of the most rapidly developing shipbuilding localities in the country.

Mr. HISS. Yes, sir; and it will need to be cared for.

Senator JONES. Certainly; it will be of the greatest importance to the Shipping Board to have that condition met and met promptly.

Mr. HISS. Before the houses are absolutely needed.

Senator RANSDELL. Where do they get their steel from, Senator?

Senator JONES. It is shipped from the East.

Mr. EIDLITZ. There is another point I should like to mention, Senator. So far as the Army is concerned, under the present condition of the law they are not permitted really to do much more than build emergency housing. That is about as far as they can go without straining. They ought to be relieved from that situation. The Navy, as I have indicated, can go further than that, and the Shipping Board is going further than that.

I thank you very much.

The CHAIRMAN. We are very much obliged to you, sir. Mr. Hiss, we will hear you now.

STATEMENT OF MR. PHILIP HISS, CHAIRMAN OF THE COMMITTEE ON HOUSING, LABOR COMMITTEE, COUNCIL OF NATIONAL DEFENSE.

The CHAIRMAN. Mr. Hiss, please state your place of residence and your relation to the Council of National Defense.

Mr. HISS. My residence is New York; occupation, architect. I am chairman of the committee on housing, of the labor committee of the Council of National Defense.

The CHAIRMAN. State what suggestions you have to make on this subject, Mr. Hiss, in your own way.

Mr. HISS. Senator, I was appointed by Mr. Gompers——

Senator NELSON (interrupting). By Mr. Gompers?

Mr. HISS. Yes, sir; he is on the advisory commission and has charge of the labor end of the commission. I was appointed on the

8th of May, and I made some investigations, and then I took a trip over the country—as far as San Francisco, and up to Portland and Seattle, Chicago, Akron, the steel towns, Pittsburgh, and the Atlantic coast.

The CHAIRMAN. How far south did you go?

Mr. HISS. I did not go south. I found that a serious condition existed, and on the 18th of August, when I returned from that trip, I sent a questionnaire to 200 cities, and received 175 answers, many of them indicating a serious shortage in the centers of war activity.

I then called a meeting of housing experts. The consensus of opinion at that meeting was that a very serious condition existed, and that it could not be met except by Government help. The condition seemed to be that the local banks had their capital exhausted by making loans for plant extensions and for providing materials for manufacture. The savings banks had loaned to the limit, and men were drawing out their deposits to invest in the Liberty loan and to help the Red Cross and the Y. M. C. A.

In every town I found the manufacturers only too anxious to go ahead and do their own housing without Government interference. They even feared Government activities. It looked to them as if when the Government owned the houses they would next own the plants, and they did not want the Government help. In Akron they said, "For God's sake, let us alone. We can build houses just as quickly. Keep the Government out of the way." They were perfectly willing to meet the situation, and they are meeting it in that place. In Cleveland they are partially meeting it. The five steel towns said, "We don't want anybody to come in here. We will, by improving transit facilities or building houses, try to take care of this situation." But many cities were exhausted financially and absolutely up against it.

The situation in respect to the housing is very apparent. That is what we see. We see we can not get any more men in these communities to the degree they wish to employ them without building good homes for them. That comes after the town is absolutely congested. In one city there are 27,000 roomers; some of them are single and some are married men away from their families.

The consideration to me seems this: For three years we have had no immigration. We have taken into the Army and Navy approximately 2,000,000 men, fine young men who had been employed in these shops. We may have to take another 2,000,000 and that would mean 4,000,000 men not available in the industries. We can in some degree help that situation by bringing in the women. In one factory we have 6,500 women, who are doing splendid work.

Senator NELSON. What kind of work is that?

Mr. HISS. The name of the plant I have forgotten. The work is war work.

Senator NELSON. On munitions?

Mr. HISS. Yes; small shells. Industrial education there has increased the output between 400 and 500 per cent. I can give you that report if you wish it.

The question is not only one of lack of labor, it is the increasing inefficiency of labor, owing to hard living conditions. We certainly have got to make a man do one and a half or two times as much work as he did before, and to do that we have got to groom him like

we do our race horses. He has got to have his wife and family with him. You take a married man away from his family, and he is worried, because he is paying rent in the town he left and he is paying his expenses where he is, he has not the ordinary cooking that he is used to or the ordinary comforts, and that man deteriorates. If the war were going to end in May, the man might stand it, but he won't stand it for a long war. We have got to take the material that we have, Senator, and stretch it out and take care of it in every way. We have got to do the unusual. We have got to do what England has done.

Take Gretna. They have a plant there 12 miles long, a splendid plant, with most beautiful houses. The turnover there was enormous. Why? They had not the amusements and amenities that people demand. So they stopped that plant, one of the most important plants in England, for six weeks, and they put all their labor to building these amenities, and since then the turnover has been negligible. It is not only that we must build houses in these places, but we must provide schools and facilities for these people to live, especially in the isolated plants.

The question is asked, Why did not the Government do this? Why didn't they know about this thing we have been talking about for six months? I will answer that in this way: I have no criticism to make of the Government. One of the generals before us was asked by me: "General, why didn't you know this?" "Well," he said, "possibly I ought to have known it, but all of a sudden a hundred times the work I had had was placed on my shoulders. I had 96 clerks; I asked for 5,000. I was given 192—96 more. I have 1,875 clerks now, and am going fast toward 3,000. I was working 20 hours a day. We had to organize, and we had to attend to the thing that was right on the desk before us."

That has been the state of the Government in all these six or eight months. We can look behind and say, "We ought to have done this." I think that maybe in six months you will be investigating my committee and find that we have forgotton some very essential thing that we ought to have done. The fact is, we have got to build houses, and build them as fast as we can. We have got to have centralized authority, for efficiency, for economy of administration, and for speed. And we have not one minute to lose, because we are four or five months behind.

The CHAIRMAN. Have you gone into that at all, Mr. Hiss, as to the standardization of the houses and the plans for these communities?

Mr. HISS. We are prepared, Senator, to go ahead. We have been doing that as far as we could without any appropriations of any kind and with volunteer services in the last four or five weeks; we have gone ahead as well as we have had means to do.

Senator NELSON. Before the Government embarks in the project of building houses, ought you not to ascertain at each place how many employees they will be sure of getting if you build houses?

Mr. HISS. Senator, there is not the slightest danger of their not getting the men if they have the houses. Take that illustration of Sparrow's Point. Eighteen thousand men were employed. 11,000 put to work, and they had net 350 at the end of eight months. They are struggling to keep from 2,900 to 3,250. Of course, the men are there. There are some professional floaters, but that does not apply

to high-class labor. The high-class laborer is the married man with a home. He is the fellow we want for these delicate operations.

Take Erie. The Government has given them money for 400 or 500 houses. They have made their plant extensions. You say the General Electric Co. ought to build their houses. I want to tell you that for Government purposes they have expended $120,000,000 in the last year for increased inventory and plant extensions. They got that money advanced on contracts. They need absolutely the highest class of labor. They are building the great propelling engines for 40 destroyers—80 engines and their accessories. They have to have the best labor to do those things, the most accurate labor.

The CHAIRMAN. The Government built some houses for them?

Mr. HISS. Yes, sir; they are being built now.

The CHAIRMAN. What department is doing that? Is it the Navy Department or what?

Mr. HISS. That is under the Navy Department; it is for the torpedo boats.

Mr. EIDLITZ. Pardon me, Mr. Hiss; we do not want to make any mistake. That was done through the clause, which is also in that bill, providing for 30 per cent advance on contracts. The Government is authorized in that same bill of October 6 to advance up to 30 per cent of the contract to the contractor, and that has been done in a great many cases.

The CHAIRMAN. The contractor is really doing it there, but the Government is advancing the money——

Mr. EIDLITZ. They advance the money, but the contractor is doing the work and will have to pay for it out of his profits.

The CHAIRMAN. It comes back to the Government on final settlement?

Mr. EIDLITZ. Yes.

Senator NELSON. Would not that be a good plan in most cases, to have the contractors do it themselves and own the buildings, and we advance the money and then recoup it out of the ships that are built?

Mr. EIDLITZ. The only trouble about that, sir, is that in many instances those advances have been practically taken up by actual working capital and for extensions of plant to enable them to carry out the contracts which they have.

The CHAIRMAN. There are certain instances where the contractor could not afford to make that investment in houses.

Mr. EIDLITZ. Exactly.

The CHAIRMAN. Because he does not know how long his industry may last.

Mr. EIDLITZ. That is the trouble. Take the Norfolk Navy Yard, for instance. There is a great cry coming from there. The local authorities there, if they were guaranteed that business would be good for five or six years, could probably get local builders to do the work, but they can not give them that guarantee. The whole thing, gentlemen, comes down to this—that it is a war-emergency proposition. We are shifting large bodies of men from one location to another. We are creating war material which presently overnight becomes useless and spending billions of dollars for it. Don't you think it would be reasonable, in order to rush this war material, to

provide a certain amount of proper housing, which, at any rate, will always be an asset to the community and to the country?

The CHAIRMAN. Now, Mr. Hiss, your investigations indicate—and that, of course, is important in view of your statement, which we recognize is absolutely true—that a great many men have been taken out of the industries, and probably others will be taken out. Do you think if these houses are built this labor can be had?

Mr. HISS. I do not think there is the slightest doubt of it, Senator.

Mr. EIDLITZ. I might call attention, Senator, to this fact, that the building industry is practically flat. Housesmiths, carpenters, and other mechanics are available and are to-day being largely used in all these shipbuilding plants and are being drawn from their ordinary occupations for that purpose.

Mr. HISS. You can make a riveter in six weeks from a green farm boy. The process is really not that of skilled labor, and it is easily acquired.

The CHAIRMAN. You need more skilled labor perhaps than some other industries.

Mr. HISS. I am convinced from my investigation, and living practically two days a week in Bridgeport, where I built the Remington development, that where proper housing is provided the labor situation as to strikes, discontent, and turnover will greatly improve. I am very close to Mr. Gompers, and he has talked to me a great deal, and also Mr. Sullivan and other of the labor men. We are very sympathetic, and I am very close to them. I worked at the bench myself when I was a youngster, and I know what the workman is. They assure me that if proper housing is provided the labor will come. The trouble is in the underlying discontent. We are in a period of discontent anyway, and I think we have got to do all we can to avoid making those conditions more difficult.

Senator NELSON. These gentlemen that you referred to, if we give them this housing will they give us immunity from strikes?

Mr. HISS. I think that would be automatic, Senator. I have great faith in American labor.

Senator NELSON. You are aware of the fact that there have been great strikes in the shipbuilding industry?

Mr. HISS. I know, sir, that there have been. I do not know, either, that it has been altogether the fault of labor.

The CHAIRMAN. What would be done in each case would depend upon a careful study of their particular case at that particular point, the possibilities of future development, and that sort of thing?

Mr. HISS. Senator, we are taking into consideration the plant, the adjoining property, other industries, and accessibility to adjacent towns, so that this development will remain available. In answer to a question by a certain Government official as to what will become of these houses after the war, my answer was this: You build a thoroughly well-planned house in a thoroughly well-planned community, with all the amenities, and you will have a good investment after the war, even after the high cost, and the only loss the Government can make is the writing off of the excess war cost. A part of that will be taken care of in the low loan for a long period. The effect of that will be that poor houses and poor communities will be empty, but these houses will be under full rent. I do not think there is the

slightest doubt that all the houses the Government builds will be absorbed by the communities.

Take Hog Island. The proposition at first seemed to be that there was no good ground to build on, except across the river on the Jersey shore. We did not think that was a very good scheme, because transit facilities were inadequate on that side of the river and it was remote from other industries. And so, after careful investigation by the most expert people, we found a property on the Philadelphia side, so that immediately that becomes an accessible suburb of Philadelphia and creates an industrial center there which ought to remain after the war, unquestionably, even at the expense of less well-built communities.

The CHAIRMAN. How would you arrange this problem? I suppose, in that instance you acquire that land and build these houses to be occupied by people to be employed at the Hog Island shipyard. How would you control them afterwards? For instance, a man might go into a house and be employed there this week by the contractor, the American International, at Hog Island, and then maybe next month he would conclude that he would like to work somewhere else?

Mr. HISS. That is in his rent contract.

The CHAIRMAN. If he ceases to be employed in that particular industry for which the house is built, his tenancy ceases and he must get out?

Mr. HISS. Absolutely. Our idea is that the Government should control it until the repayment of the loan, and have inspectors and agents to look after the whole building scheme to the end, as a real estate project, and get rid of it just as rapidly as possible, and get the Government's money back, and get out of the community just as fast as possible.

Mr. EIDLITZ. Of course, Hog Island is an agency contract, a Government-owned proposition all the way through. As long as they own the machinery and the plant, there is no reason why they should not own the housing for the workers.

Senator NELSON. They do not own the land, though.

Mr. EIDLITZ. They do not own the land?

Senator NELSON. No; that is what the testimony here shows.

The CHAIRMAN. They have a right to acquire it, I believe.

Mr. HISS. They have a right to acquire it.

The CHAIRMAN. Under an act of Congress.

Mr. EIDLITZ. They have a right to acquire it at a fixed price.

Senator NELSON. I do not know about that, but they have a right to acquire it.

The CHAIRMAN. I can see very well how you might control a tenant, but suppose a man bought one of these houses and paid for it?

Mr. EIDLITZ. That would be long after the emergency would be over, I think, Senator.

The CHAIRMAN. You might put that covenant in a deed of some sort.

Mr. HISS. They would, until the emergency was over. In Wilmington the people said, "We do not care very much who occupies these houses, because whoever goes in there from the community will empty another house." It simply makes the community more flexible.

Mr. EIDLITZ. Here is this also to be remembered, that in all these communities the normal growth has not been maintained in the last two years, due to the high building costs, and this growth produced by the war emergency bears no relation whatever to the situation, and whatever you do probably would not take care of the normal growth in two years.

Senator NELSON. Of course, all these activities that we are engaged in now—the manufacture of military supplies, munitions, shells, and all that—will to a large extent cease after the war is over.

Mr. HISS. England is looking after that now. They have a reconstruction committee.

Senator NELSON. England has conscription, and they will adopt the system that prevails on the Continent and have general military training and have all their forces in the army, as they have in France and Germany. That is what England will come to. That is what Lord Roberts advocated, but he could not get them to see it until the war came. They will have conscription, but we will never have conscription in this country in that sense.

Mr. EIDLITZ. You might not call it conscription, sir, but if the need became great you would call it mobilization. But whatever you call it, you can not mobilize or conscript or anything else unless you give a man a decent place to live in. You can not order him to live worse than his neighbor.

Senator NELSON. I think within a year after the war is over our Army will be reduced to 200,000 or 300,000 men, as it was after the Civil War. It was reduced then to a large extent. We will never have a very big standing Army.

Mr. HISS. I think not.

Senator JONES. That is one of the main objects of this war, to see that they do not have to keep it up over there, too.

Mr. HISS. If we succeed in that we will have won a great victory.

The CHAIRMAN. In this case you referred to where you have so many women employed; that was rather a stronger statement than I thought you would have made. Out of 8,500 employees I think you said 6,000 were women?

Mr. HISS. I can send you a full statement of that, Senator.

The CHAIRMAN. What I am getting at is this: Are those women all from that particular community, or do they come in from other communities?

Mr. HISS. Both.

Senator HARDING. Where is this?

Mr. EIDLITZ. This is in Dayton, Ohio. They were fabricating small shells, and they put in a training school. This was for a foreign Government. They put in a training school to educate the women, not putting them in the shop with the men to start with. They had a forewoman to train these girls in a separate shop. The output of the women on the same machines was 50 per cent higher than that of the men. They then took the men and put them in the training school, and they came up to the same output. They did away with the lost motion.

Mr. HISS. They are keeping up the price and not cutting them off when they find they can do more work. Outside of that, they took care of those girls physically. If they found a girl was unable to

stand the strain of working continually at one process, they taught her to use three machines. If the work was too fast for her they changed her to something else. They had rest hours. They had food given them at certain times. The fact is, they were groomed up to do the work of two or three ordinary people.

The CHAIRMAN. How did their wages compare with those of the men?

Mr. HISS. They paid them the same money.

The CHAIRMAN. Were they married women or unmarried women, or did they make any distinction?

Mr. HISS. Both.

Mr. EIDLITZ. They also took school teachers, stenographers, etc.

Senator HARDING. In Dayton they are making $40 a week, many of them.

Mr. HISS. Exactly. They do not discriminate at all, and they should not. If they do the same work, why shouldn't they be paid for it?

Senator RANSDELL. They should be paid exactly the same.

Mr. EIDLITZ. There is just one phase, gentlemen, I should like to have you consider for just a moment. It may perhaps clarify the situation. We are spending billions and billions of dollars for creating war machinery, the bulk of which is sacrificed and becomes worthless when it is used. One torpedo boat, one submarine, puts a 10,000 or 15,000 ton ship out of business. We are discussing here securing promptly the means of winning this war. The chances are that the amounts involved here are less than $100,000,000 or $150,000,000. The chances are more than good that the ultimate loss on that to the Government will not be more than $25,000,000—say, $30,000,000.

Senator NELSON. You are too modest; we deal in billions nowadays.

Mr. EIDLITZ. Say it is $30,000,000. But after that you have created in 20 or 25 different communities a proper development, a proper system of homes for workers, and the United States Government has made an example of what can be done economically, in a good way, in a decent way, in an intelligent way, with the housing for the workers of the country.

Senator NELSON. In other words, you mean this, that when the war is over these torpedo boats and these flying machines will, a good many of them, go to the scrap heap, and why may not these houses for the Shipping Board share the same fate? It would not be amiss if they did.

Mr. HISS. No; that is what we think.

Mr. EIDLITZ. It is not quite that, sir. The $1,000 shell which you shoot off becomes valueless the moment it is gone, unless it does its trick on the Hun, but that house remains and becomes a permanent home for the worker, and you have done a constructive thing. In other words, in the one proposition we are spending money for a destructive proposition and in the other we are using the money for making a constructive proposition in connection with that destructive function.

Senator NELSON. Of course, where you build up these houses in the suburbs of a town that has other industries they will be a permanent thing, but some of these shipyards are located in places where there is no such thing, and it is a question of what will become of the buildings when the shipbuilding is done. Of course, we have to take our chances on that.

Mr. HISS. There are not many such cases, Senator.

Mr. EIDLITZ. I think if you figure that 20 per cent of that $150,000,000 will be lost you will be very safe.

Mr. HISS. The Senator was perfectly willing to lose it all with the shells, if it served its purpose.

The CHAIRMAN. You build these houses in a substantial way? You would have streets and sidewalks and electric lights?

Mr. HISS. A garden city, Senator.

The CHAIRMAN. Sewers?

Mr. HISS. Everything.

The CHAIRMAN. Perhaps a schoolhouse in the center?

Mr. HISS. You would have to have it. You could not get the people there if the women could not send their children to school.

The CHAIRMAN. And churches and everything else?

Mr. HISS. I hope so. I hope we will illustrate to this country what can be done. I do not mean to say that the manufacturers have not been doing this, because where 12 or 14 years ago there were only two or three industrial developments there are 1,500 industrial developments, and they are going fast toward 2,000.

Senator RANSDELL. What is your idea about the way these houses ought to be constructed? Would you provide a house for each family, with a little plot of land about it?

Mr. HISS. As far as possible, Senator. We may be building in a town, and the multiple family house may be a benefit there. There would be two-family houses and semidetached houses, and always with a little piece of land, to attach a man to his surroundings.

The labor leaders heretofore have advised their people not to buy houses, because it made a slave of the man. When business ceased and he wanted to go to another community he had the house on his back. My answer to that was, make a stock company. Let the man own his house through stock, and at a certain prearranged price let him dispose of that to the company. I spoke of that to the labor leaders, and they thought that was not a bad idea. I said to them, "Do not make the man a floater; do not take him out of the community. Let him be a good citizen. Let his wife know the neighbors and have the church association, and let the children know the other children. Make a good American citizen of him." When he wants to go to another place he sells his stock. That is very easy to do, because we are arranging schedules of rents and schedules of sale for everything. We would not want a man to have a house unless he makes a certain wage. We would know exactly how many married men and how many single men are in each community, and in providing houses we would take all those things into consideration. A man rents his house at one price; he buys his house on monthly installments at another price. An adjustment can be made at the end of two years, if he wishes to leave, between the rent and the higher price he has paid, and he gets his money back. He is considered then a renter for two years.

Senator NELSON. Should there not be some protection for the laboring man if he buys his house from the manufacturers that he is working for——

Mr. HISS. He should not buy it from the manufacturer; the manufacturer should not own it.

Senator NELSON. I mean the company that is engaged in building the ships. You do not believe they should own it?

Mr. HISS. No, sir; I believe it should be a community problem.

Senator NELSON. You spoke of a company. What company should own it?

Mr. HISS. A housing company.

Senator NELSON. You believe, then, that in each case there ought to be a corporation formed?

Mr. HISS. Yes, sir; an independent corporation.

Senator NELSON. Through which the land is to be acquired and these houses built?

Mr. HISS. Yes, sir; and it should be a limited-dividend company.

Senator NELSON. And the Government, of course, would have to take the stock? There would not be anybody else to buy the stock in the first instance?

Mr. HISS. They are perfectly willing in most cases to pay 20 per cent and take their risk.

Senator NELSON. Who?

Mr. HISS. The local community.

Senator NELSON. You would not expect the laboring men to do it?

Mr. HISS. No, sir. The terms to them should be made just as easy as possible.

Senator NELSON. But would you not leave it open, so that a laboring man, if he saw fit, might buy?

Mr. HISS. Yes, sir; in every case.

Senator NELSON. If they wanted to buy——

Mr. HISS. They could buy, and I think they should be encouraged to buy.

Mr. EIDLITZ. That agreement recited here is made to-day by the Newport News Corporation.

Senator NELSON. Is that their plan?

Mr. EIDLITZ. That is the plan for Newport News, the plan that was suggested in my report of November 24.

The CHAIRMAN. The idea is to have the corporation give a first mortgage to the Government to secure the Government?

Mr. EIDLITZ. A blanket mortgage on the whole proposition.

The CHAIRMAN. So that the corporation owns the property and has a legal title, subject to the lien of the Government?

Mr. EIDLITZ. Exactly.

The CHAIRMAN. That will provide for annual payments, amortization——

Mr. EIDLITZ. Yes, sir; 3 per cent a year.

Senator NELSON. Of course, the income will be largely from the rentals?

Mr. HISS. And sales. At certain stated times that money is paid over to the Government.

Senator NELSON. And that will be a fund from which the Government would be reimbursed for its outlay?

Mr. EIDLITZ. Yes, sir.

Senator NELSON. But to begin with the Government would have to furnish the money to buy the stock?

Mr. EIDLITZ. They would have to furnish 80 per cent of the cost of the proposition at 4 per cent for 15 years. In England they went as high as 40 and 60 per cent.

Senator NELSON. That is what they call in England a "three-year purchase."

Senator JONES. It could be worked out a good deal along the line of building and loan associations.

Mr. EIDLITZ. Here is the final report of Mr. Ackerman, as read before the Council of National Defense.

Senator JONES. Can that be put in the record?

Mr. EIDLITZ. Yes, sir.

Senator JONES. I suggest that it be put in the record.

(The report referred to is here printed in full, as follows:)

Knowledge of the housing shortage in Great Britain and America prior to the war, a meager knowledge of what England had accomplished in this field during the war, and a fear that our output of ships and munitions would be seriously diminished as a direct result of a lack of housing facilities adjacent to shipyards and munitions plants, were factors which brought about my trip to England in September of this year. I felt that we might profit by England's mistakes and gain by her experience.

Through letters of introduction I was afforded every opportunity of studying the growth and development of her policy which has resulted in a most remarkable achievement. I went primarily to study the technical phases of industrial housing; I found myself confronted by no less than a national problem, a problem which was to involve international values at the close of the war.

Prior to the war England had, by legislative enactment, assumed the obligation of providing adequate homes her working population; governmental machinery had been created and the methods well developed. With this phase of the problem I was familiar. I therefore went directly to the ministry of munitons and there organized a program covering seven weeks and proceeded with a study of the various phases of the problem. I spent two and a half weeks in the ministry of munitions, where I studied the organization of the housing section, the legislative acts under which munition workers were housed, the general scope of the work, the technique employed, and particularly the attitude of the Government toward this problem. During this period I interviewed labor representatives in Parliament and people in every walk of life with a view of determining what was the general attitude of the British people toward this phase of war technique. Opinoin was unanimously in favor of the policy adopted, which policy I shall outline.

Following this I spent two and a half weeks in the field checking the results of this study in London, after which I returned and devoted the remainder of my time to a study of the problem of reconstruction in general, and in particular that phase of the problem which anticipates the adequate housing of England's entire working population after the war.

At the outset it should be pointed out that in England the problem of wartime industrial housing differs from the prewar problem only as regards urgency and scale, and that the present policy looks toward the creation of better than prewar living conditions for the workers in industrial communities.

It was impossible at the time of my study to obtain exact figures of the total numbers housed in hotels and in permanent cottages or of the total cost involved. This data was being assembled when I left. The total assumes colossal proportions, for wherever munitions are being fabricated to any extent, either in Government-owned plants or plants belonging to private enterprise, there one finds newly created communities for munitions workers, caring for populations ranging from a few hundreds to eighteen or twenty thousand. The more recently developed communities are well planned, well organized from the physical and social point of view, and quite as thoroughly worked out in every respect as the garden cities built prior to the war.

The first act of the Government, following the declaration of war, was to set in motion the existing machinery—local authorities, private enterprise, industrial corporations—which had already provided homes for workers. Owing to the precarious nature of the investment these groups were slow to respond, and then followed a series of bargainings as to how much the Government should advance and as to the final disposition of the property. The details of this phase need not concern us; for as an administrative policy this method was soon abandoned, and that of centralized initiative, centralized construction, and centralized operation substituted. The Government still makes use

of the various agencies used in the initial effort, but to a very limited extent. The operations are now initiated, built, and managed by the central body in London.

I shall endeavor to bring into a concise summary the result of my study, and in that summary I shall indicate five factors which were primarily responsible for England's remarkable achievements in the fabrication of a limitless supply of munitions of war. This summary expresses the composite opinion of many people and is based upon what I actually saw during my survey of a score of munitions-producing centers.

The first factor may be stated as the broad powers and authorities created by the defense of the realm act.

Under this head should be noted—

(*a*) The power to take land, etc., leaving the question of compensation and future disposition to be settled by subsequent act of Parliament. Land is taken during the war for housing and other purposes upon a prewar valuation.

(*b*) The power to erect buildings for housings and related purposes; in other words, to create towns and communities. (The British prewar methods of building workingmen's homes will greatly simplify the general disposition and use of these now Government-owned communities. After the excess war costs have been deducted the permanent portions of these communities with all of their re-creation features can be easily transferred to local authorities or to copartnership companies thereafter to be operated upon the already established prewar basis.)

(*c*) The powers set up and assumed by the Government looking toward providing within and without the factory such a physical and social environment as would maintain the highest standard of health and efficiency among munitions workers.

The second factor is the centralization of housing operations under a single ministry in London where practically all of the work in this field is done by the ministry of munitions. (This work does not apply to work started by local authorities during the early stages of the war.)

Under this head should be noted the four major subdivisions of executive authority under which housing operations are conducted:

(*a*) The central organization in general control of the design and arrangement of the areas to be used for industrial community purposes, as well as the details of the various types and kinds of buildings to be erected.

(*b*) The organization in charge of construction.

(*c*) The organization in charge of the management and operation of the properties after completion. (This work involves functions similar to real-estate management and also functions similar to the management of a town under a commission form of government.)

(*d*) The department in charge of welfare, both within and without the plant. These two departments are known in England as the intermural and the ultramural welfare organizations. The work under the latter has been found of the very greatest importance in the stabilization of labor.

NOTE.—It should be noted that the problem of housing workers in munition plants, wherever these plants be located, is now treated as a single problem having a certain number of variations to meet local conditions. Therefore it is possible to utilize the knowledge of the staff of experts in London and the experience gained in each operation over a very wide field of activity. At the outset it was thought that the local initiation of schemes would stimulate local interest and produce the best results. Local activity was found to be too cumbersome for use during the war.

The third factor is the complete acknowledgment (not a part of the initial concept, it should be stated, but evidenced by the physical accommodations provided) that maximum production can not obtain until every human element in a community had been brought to the highest attainable state of social, moral, and physical well-being.

NOTE.—While this may appear like the restatement of an old theory, it is no longer a theory in England. I merely witnessed the results of its application. The importance of this thought was emphasized again and again in my conversations with many men and women responsible for the output of munitions. I refer particularly to my conversations with Sir Edward Pierson, Sir Herbert Austin, and Mr. Poppe, of White & Poppe.

The fourth factor is the maintenance of the standards already established by the two acts of Parliament, namely, the housing of the working classes act

of 1890 and the housing and town planning act of 1909 as to what actually constitutes adequate living conditions.

Under this head it should be noted that the present tendency is—

(*a*) To establish permanent communities, with gardens, playgrounds, schools, recreation buildings, etc., upon the best town-planning lines.

(*b*) To build as many permanent buildings as is possible under the handicap of a serious shortage of materials and labor.

(*c*) To increase rather than diminish the prewar standards as regards area of plots, gardens, allotments, playgrounds, etc. (The present tendency is to provide approximately 12 cottages to the acre.)

The fifth factor is the recognition of the vital part which a physically well-organized community plays in the stabilizing of labor, the reduction of the labor turnover, and its consequent and inevitable increase of output.

In connection with this thought we should consider, as England now considers, the problem of economic reconstruction.

There will be a serious housing shortage after the war. This must be met in order to stabilize labor and continue production. Therefore, it is England's policy to erect permanent buildings, in so far as it is humanly possible so to do, in order to in part meet this shortage and thus reduce the economic shock which the world is sure to experience at the close of the war.

It is my belief, and this is reenforced by solid British opinion, based upon three years' experience and trial, that had England failed to initiate this broad policy of stabilizing labor and of raising the efficiency of each human unit in production to the very highest possible point attainable that the flow of munitions across the channel would now be reduced by a very considerable percentage. What this means in terms of war should be readily grasped.

Great Britain expects of America no less than the very maximum output of ships and munitions of war. No less than this must be our immediate contribution. Without ships the war may be lost.

Maximum production of ships and munitions depends in the final analysis upon efficiency in production, and in turn this depends upon the maintenance of the highest attainable standard of physical well-being of individual workers, stable conditions of employment, and a minimum labor turnover. British experience proves that high wages alone fail completely to produce efficiency. British policy recognizes that wholesome social and physical environment is the dominating factor controlling output.

Therefore, if we are to do our part and fulfill our obligation to ourselves and our allies, we must immediately create such environments around our munitions plants. Inaction in this respect may cost us the war.

Once this basic consideration is acknowledged the problem immediately becomes relatively simple. We no longer need bicker and bargain and treat with municipalities or industrial corporations regarding what financial part of this national obligation they should assume. The problem becomes merely a phase of war, and we have but to organize the production of ships and munitions as we organize the production of soldiers.

How shall we organize this phase of war? Let us take the step in order. First, create a central body with—

(*a*) Powers to acquire land under authority equal to that created by the defense of the realm act. The final disposition of property need not now be treated.

(*b*) Powers to survey needs for housing facilities and to determine, in cooperation with a central priority board, the relative importance of industrial operations.

(*c*) Powers to design and construct communities where the needs of such have been made evident by the survey.

(*d*) Powers to operate and manage these communities during the war and for a few years thereafter along lines of policy similar to that expressed by what is known as the copartnership tenants or public-utility societies in England.

(*e*) Powers to maintain a high standard of physical well-being in munitions plants (adopting the standards set by our most progressive industrial corporations) and to organize community activities within the communities thus created.

The second step. Create a commission to study the final disposition of these properties. Such a commission should consider such questions as—

(*a*) The organization of local nonprofit corporations to manage and develop the communities created during the war.

(*b*) The saving of the appreciation of land values for the benefit of the community as a whole.

(*c*) The establishment of the value which should be written off at that time as belonging to the cost of war.

(*d*) The basis upon which such communities could be transferred to municipalities.

By such a method it would be possible to advance immediately upon new schemes, and in the event of a lack of progress upon schemes now under way such schemes could be taken over by the Government and handled through the central body.

F. E. ACKERMAN.

Senator NELSON. Have you any data about the places where you want these houses built, how many houses are needed, etc.? Is there any way to tell that, or is it guesswork?

Mr. HISS. There is no guesswork, sir.

Senator NELSON. Can you give us the names of the places where you want the houses built, how many houses at each place, and at what cost?

Mr. HISS. Senator, we can do that in the places that have howled the loudest, but we can not give you those that have not, because we have not had time to investigate. We can say broadly that the country will need about 40,000 houses——

Senator NELSON. That is just a guess, though. We have nothing to go by except your ipsi dixit.

Mr. HISS. We can give you in an hour all those that we have investigated.

Senator NELSON. The other departments of the Government generally send us in detailed estimates so that we know what we are doing. You simply say you will want a lump sum, but when we come to ask you at what places you intend to build these houses, how many houses, and at what cost, you do not furnish us the information.

Mr. HISS. There is no question about that; we have all that information, sir.

Senator NELSON. Have you filed it here?

Mr. HISS. No, sir; we have not been asked to.

Senator NELSON. I suggest that you furnish those data. Tell us the plants that need houses, how many they will need, for how many people at each place, and what they will cost, so that we will know just where we are at.

The CHAIRMAN. Of course that would not be final; other developments might show up.

Mr. HISS. Further, we want enough money after a few months to cover——

Senator NELSON. Yes; but you are so greedy we want some way to check you up.

Mr. EIDLITZ. We are not very greedy; we are paying our own expenses here.

Senator NELSON. I did not mean anything personal, you know.

Mr. HISS. We think that the contracts we are making with these towns are a crime against the communities. They are stringent because we fear that there would be a constant stream of people here trying to get something they ought not to have, and we wanted to make it a little hard for them to get it.

Senator NELSON. It would be a godsend in many instances to the real estate men who own suburban property.

Mr. EIDLITZ. If you will give us the bill, we will take care of the property. We will occupy the land first and adjust the prices afterward.

Senator NELSON. You understand, we are not criticising you gentlemen at all.

Mr. HISS. Not at all, sir; we think you are right on our side.

Mr. EIDLITZ. I can give you a preliminary report here, Senator, which applied to the expenditure of about $34,000,000 divided up into places, so far as the departments are concerned. This was made on November 24.

The CHAIRMAN. Do you want to put that in?

Mr. EIDLITZ. Yes.

(The report referred to is here printed in full, as follows:)

NOVEMBER 24, 1917.

Hon. NEWTON D. BAKER,
Secretary of War and Chairman Council of National Defense,
War Department, Washington.

DEAR MR. SECRETARY: As directed by the chairman of the Council of National Defense, I have taken up the question of the lack of housing for industrial workers in various localities in connection with the departments of the Government and find that the Army believes that only housing of a temporary nature could be provided for or that temporary relief might be available under the urgent deficiency bill of October 6, 1917, which contains the provision whereby 30 per cent of the amount of an order may be advanced to the manufacturer under certain conditions. But in view of the fact that the money would have to be paid back by June 30, 1919, this clause can hardly be considered helpful in the situation.

It is believed that funds are available both in the Navy Department and in the United States Shipping Board. It therefore becomes desirable to classify the cases thus far investigated and to provide a financial program, as follows:

HOUSING FOR INDUSTRIAL WORKERS ON WAR PRODUCTS.

In determining housing relief in localities where the lack of these facilities is restricting the output of war products it is imperative to arrive at a definite program, so that, as far as possible, the same consideration will be given by the Government to all those demonstrating their right to receive it. Furthermore, it is vital that this governmental aid shall be recognized as a war emergency measure to attract and induce workers to make their homes in certain localities and should not be regarded or administered as an industrial loan made under normal conditions.

From investigations thus far, three phases of the housing problem are manifest:

I. A community problem where a number of industries are fabricating war products.

II. Where an individual plant is fabricating war products in an isolated position, and its employees are the bulk of the working population.

III. Where the company or corporation is fabricating war products under an agency contract in a plant Government owned.

The following solution is suggested for each of these cases:

I. For the community problem, manufacturers, etc., are to furnish 20 per cent of the cost of the total operation. The Government to furnish an 80 per cent loan for same at a 4 per cent rate for a term of 15 years; the Government loan to be amortized at the rate of 3 per cent per annum. Final balance to be paid at the end of 15 years. The Government to receive a blanket mortgage covering the whole of the transaction. Refund and adjustment to be made on houses as they are sold, and audit permitted whenever desired by the Government. It must furthermore be understood that the dividend must be limited in order to enable the workers to acquire these houses at a reasonable price or to occupy them for a reasonable rental, due to the advantage of a large loan at a low rate for a long time.

II. For the isolated plant, the corporation, or individual operating it, should supply the land and, if possible, the necessary underground service, such as

sewerage, water, light, and paving, and the Government shall furnish all of the funds required for the actual building, at 4 per cent for a period varying from 10 to 15 years. The Government to receive a blanket mortgage covering both land and buildings. Furthermore, the corporation or individual should increase the staff of the accounting office handling owned real estate, as may be necessary, keep a separate set of books for handling the property for which the Government has made the loan, and, if possible, make no charge for this service. Furthermore, periodic examinations of the accounts will be permitted by authorized agents of the Government, and the individual or corporation shall make an accounting to the Government every three months, and shall refund and adjust the mortgage for houses sold.

III. In Government-owned plants operating under agency contracts due to the fact that the Government owns the housing of the machinery, there is no reason why it should not own the housing for labor. In cases of this kind it is suggested the full amount be provided by the Government for the entire building operation, preferably cooperating as to construction with the individual or corporation acting as its agent at the plant. The value of the land must be stipulated at the outset and the Government shall have the right to acquire it at that price. The agent of plant to adjust mortgage and refund as houses are sold. Consideration should be given to labor under solution II and III, so that it may acquire the houses at a reasonable price or occupy them at a reasonable rental. In all cases, land values must be fixed at the outset. Plans for houses should be passed on by properly organized experts, so as to secure standardization and economy in the interest of proper housing, and to conserve future values. Priority shipments must be secured and the operation inspected and safeguarded as to development, construction, and finances.

Under No. I, "A community problem," the condition of Bridgeport is submitted. Here 16 to 20 manufacturers required by January 1, 10,000 additional workers, with no housing available; present output seriously restricted. These firms are prepared, through a housing company, to build 1,500 houses, providing there is made to them a loan of $3,000,000 at 4 per cent for 15 years, and under conditions which practically guarantee the return of the principal and interest to the Government. (See Exhibit A.)

Under No. II submit Sparrows Point.

Here about 50 per cent of the plant capable of producing ships at the rate of nearly one and three-fourths ships per month is standing idle due to lack of housing for 3,500 workers. The company desires to provide 1,500 houses, including a business group, which they estimate will cost $5,866,281, and put up their land and present improvements of $415,000, leaving a total amount to be advanced by the Government of $5,451,281. For handling the above proposition a corporation is to be formed in which would be vested, free and clear, the ownership of the lands to be improved, the Government holding a blanket mortgage both for land and improvement, dividends, as far as the corporation is concerned, to be limited to 6 per cent, and it shall receive no further profit from the enterprise. The proceeds of the sale of houses or surplus reserve from rentals to be distributed as follows: The Government to receive 85 per cent of its loan before the housing company received any portion for the values of its land, after which adjustment is to be made as interest appears, the Government to receive the final balance of its loan, if possible. (See Exhibit B.)

Under No. II the case of Bethlehem must also be considered, due to the fact that the company has this year spent about $6,000,000 a month for plant extension, and hence is unable to undertake this housing proposition itself. It urgently requires 7,100 men additional by February 1, several thousand of which could be employed at the present time if housing were available. It desires to build 2,000 houses, with the necessary streets, sewerage, and water systems, at a cost of 8,950,000, less the value of land and present improvements, amounting to $500,000; total amount to be advanced by the Government, $8,450,000. For handling the above proposition a corporation is to be formed in which could be vested, free and clear, the ownership of the lands to be improved, the Government holding a blanket mortgage for both land and improvement, dividends, as far as the corporation is concerned, to be limited to 6 per cent, and it shall receive no further profit from the enterprise. The proceeds of the sale of houses or surplus reserve from rentals to be distributed as follows: The Government to receive 85 per cent of its loan before the housing company receives any portion for the value of its land, after which adjustment is to be made as interest appears, the Government to receive the final balance of its loan, if possible.

This additional housing is largely needed for work on ammunition and guns for the Navy, and accessories of various kinds for ships, torpedo flasks, etc., amounting to nearly $70,000,000. This company is also furnishing over $200,000,000 of war products for the Army. (See Exhibit C.)

Under I. General Electric Co. of Erie, Pa.: This company requires 3,000 additional men to operate a new, large machine shop, in which will be manufactured turbines for the propulsion of the United States destroyers. This company is fabricating 40 sets of engines for United States destroyers. They require 500 houses. The company asks for a loan of $1,000,000 for 10 years at 4 per cent, it supplying the land at $200,000 and cash $200,000 through a realty company, and stipulate that at the end of three years after the termination of the war an appraisal be made to determine the cost of contracting the buildings under the conditions as to cost of labor, materials, etc., then prevailing as compared with the present cost, and adjustment to be made in the mortgage at that time. (See Exhibit D.)

Under Case I, the Chester Shipbuilding Co. required housing for 1,700 men, to cost $1,605,000, less 20 per cent, so that the total to be loaned by the Government is $1,284,000. This company will unquestionably give a blanket mortgage for the entire operation under the terms of Solution I in the program, namely, that they furnish 20 per cent of the operation, that the Government furnish 80 per cent of the same at a 4 per cent rate for 15 years, and the corporation amortizes this loan at a 3 per cent rate per annum or better.

Under case No. III, the Merchants' Shipbuilding Corporation operating government-owned plant at Bristol requires $2,050,000 in addition to the $750,000 already granted to it by the Emergency Fleet Corporation to enable it to house its workers. The slips will be ready December 15, also the materials for keels at the same time, but no labor accommodations are available to presecute the work.

Another instance under case No. III also is the American International Shipbuilding Corporation at Hog Island. This is a government-owned plant operating under an agency contract and requires 30,000 men, 15,000 of which number it is expected can be housed in Philadelphia and such suburbs as are properly located with reference to Hog Island. The maximum number that they believe would be willing to live in barracks provided at Hog Island is 3,000, these being limited to men used on the rough work of shipyard construction. This leaves 12,000 men for whom housing must be provided away from the plant and in a location independent of any existing transportation lines. For such purpose the company estimates that it will require from $10,000,000 to $12,0000,000. The resident engineer suggests that a very material development is essential to the maintenance of the ship construction progress, but as these houses could not in any event be built all at one time, it would be permissible to stop the building, should it overtake the actual needs as they develop.

Under case No. I, the Texas Steamship Co., at Bath Me., through their president, William A. Thompson, jr., state that they are working about 1,300 men and that if housing could be obtained for 500 or 600 more, a 25 per cent increase in output could be obtained. Of the eight vessels under contract one is built and in use, one will be ready December 1, 1917, one July 1, 1918, one August 1, 1918, one October 1, 1918, one November 1, 1918, one about March 1, 1919, and one about July 1, 1919. Bath has a population of about 12,000. It is thought that it will be very difficult to interest the community in the problem. The Texas Steamship Co. would be willing to build 200 houses at about $3,500 apiece, including land, amounting to $700,000, of which the Government would loan $560,000 at 4 per cent. In connection with this proposition, President Thompson seemed to feel that it would be difficult to get men even if the houses were built and that no guarantee could be given in connection with the operation. Unless it is most important that the time of these ships be speeded up, we believe that action should be deferred at this time, as in my opinion the chances are good for a substantial loss in connection therewith.

President Cobb of the Bath Iron Works building eight destroyers employs from 800 to 1,400 men. The peak load might be 2,000 men. He says he requires 100 houses for skilled workers and 25 houses for salaried men. This would involve an expenditure of about $450,000. He did not feel that their company should be asked to contribute, although they might be willing to contribute 10 per cent of this amount and the inference was that they might consider 20 per cent, but without guaranteeing the Government against loss. Their contract is about $14,000,000. He made the statement that his contract was in

the most forward condition of any in the country but he did not believe he could deliver on time.

Fore River Shipbuilding Co. at Squantum, Mass., with a contract of approximately $127,000,000, state that no housing is needed and that they will get their forces from Boston. We believe that this situation should receive immediate investigation to determine whether Boston can supply the needed housing.

Under case No. I is the Sun Shipbuilding Co., who require 1,000 houses at $2,800,000, less 20 per cent, or the amount to be furnished by the Government being $2,240,000. No definite arrangement as to details has been received as yet from them.

Fore River Shipbuilding Co. at Quincy need about 600 houses, but no definite statement has been made in reference to same. This should come under class 1, and we believe it can be so arranged.

Under case No. II is the Newport News Shipbuilding Co., who require 700 houses at $2,500 to $3,000 apiece, or approximately $2,000,000. They will furnish the land, but their definite proposal has not been received, although it is due.

Under case No. I is Wilmington, including the Harlan & Hollingsworth and the Pusey & Jones companies, building 26 vessels of a total of 129,000 tons. They require 1,000 houses, to cost about $3,000,000; the loan to be furnished by the Government to be $2,400,000 for 15 years, they to pay annual interest of 4 per cent and amortization of 3 per cent, and they to guarantee that 85 per cent, at least, of the Government loan will be refunded—the balance, if possible. The definite proposition has not been received.

It is needless to say at this time that unless housing is provided immediately for the various localities above mentioned and for some others which will follow in the immediate future, the progress of the shipbuilding of the Government, both for the Navy and the Shipping Board, will be most seriously retarded. In most of the above instances this restriction of output is very large, varying at the different plants from 20 per cent to 50 per cent, and in view of the fact that this proposed investment will be a permanent improvement to the localities in which it is made, tend to stabilize labor, render labor more efficient, and hence be directly reflected in all "cost plus" contracts, there would seem to be but one answer, and that is immediate action.

EXHIBIT A.

BRIDGEPORT.

Arrangement for borrowing money from the United States Government with which to build houses in Bridgeport.

Meeting of manufacturers in Bridgeport to-day approve the following plan:

That the Bridgeport Housing Co. should borrow money from the Government, furnishing immediate security in the amount of 20 per cent of the loan in the form of first lien on its real estate developments, cost of which at this date is $600,000.

The Bridgeport Housing Co. to furnish pledges of manufacturers as per list submitted, with the exception of the Crane Co. and the Remington Arms U. M C. Co., and with such other corporations or individuals as will later agree to become a party to this underwriting, to take stock in the housing company, which stock shall be used to repay to the Government 30 per cent of the loan during the first five years.

The loan to be fully repaid in 15 years on an equitable basis of amortization which would contemplate the paying of loan by partial payments annually with an agreed-upon final payment at the end of the 15 years of approximately 30 per cent.

The details of contract to be entered into to stipulate the definite arrangements for repayment of loan.

The housing company would agree with the Government to use all of its funds thus obtained for building homes in and near Bridgeport for workers in the various plants of Bridgeport.

The Government and the housing company to agree on a trustee to handle the money, presumably one or more of the national banks of the city of Bridgeport.

The Bridgeport Housing Co. on basis of present promises makes application for loan in the amount of $3,000,000, provided the manufacturers of Bridgeport who have already agreed to this and such others will raise sufficient funds to furnish

proper guaranty for repayment of 30 per cent in five years on an interest rate not to exceed 4 per cent.

The Bridgeport Housing Co., by W. H. Ham.

October 23, 1917.

BRIDGEPORT SAVINGS BANK,
Bridgeport, Conn., October 25, 1917.

Mr. OTTO M. EIDLITZ,
Chairman Housing Committee, Washington, D. C.

DEAR SIR: In connection with the proposed loan of the United States Government requested by the Bridgeport Housing Co., this bank would undertake, in cooperation with other savings banks of the city, to take up the 30 per cent due on the Government mortgage at the expiration of 15 years. This is based, of course, on the plan submitted by the manufacturers and the housing company of Bridgeport as presented by Mr. Ham to your committee.

Yours, very truly,

SAMUEL M. HAWLEY, *Treasurer.*

Table showing present number of employees and increase required by factories on war contracts.

Name and type of product for war use only.	Now employed.	Increase required by Jan. 1.
Housatonic Shipbuilding Co. (ships)	44	556
Lake Torpedo Boat Co. (submarines)	1,472	728
Remington-Arms U. M. C. Co., U. M. C. division, Bridgeport, Conn. (rifles and bayonets)	11,000	.....
American & British Manufacturing Co. (ordnance projectiles)	900	225
Remington-Arms U. M. C. Co., U. M. C. division, Bridgeport, Conn. (military ammunition and artillery cases)	7,300	4,700
Eastern Malleable Iron Co. (malleable and gray iron castings)	500	300
Ashcroft Manufacturing Co. (Manning, Maxwell & Moore), (safety valves, pressure gauges, steam specialties)	921	279
Bullard Machine Tool Co. (machine-tool work, A1 priority board classification)	1,100	200
Bullard Machine Tool Co., foundry (machine-tool foundry work, A1 priority board classification)	102	150
Locomobile Co. of America (3-ton truck chassis for United States Army)	1,900	500
Bridgeport Brass Co.:		
Brass rolling and manufacturing for cartridge shells, etc	3,000	150
For Electric Cable Co. (insulated cable, telephone, telegraph power, etc.)	360	100
William G. Phillips & Co. (engineering works for Bullard Machine Tool Co., gun-plant construction for United States Government)	700	800
Bullard Engineering Works (gun contract Gc-124)	[1] 1,000	.....
Singer Manufacturing Co. (sewing machines for factories, used for uniforms and shoes, cartridge boxes, scabbards, tents, and aeroplane canvas)	1,500	([2])
Baird Machine Co., tumbling machines, wire-working machines, power presses	190	.....
Hamilton & DeLoss (Inc.), parts for United States standard aircraft engine (similar contracts pending)	30	170
	31,415	9,858

[1] None Apr. 1. [2] See letter.

The above cover such plants as we have been able to get report on only. Above figures are authenticated by accompanying data.

The Bridgeport Housing Co.

October 17, 1917.

EXHIBIT B.

SPARROWS POINT.

Land:

About 200 acres, at $1,500 per acre	$300,000	
Expenditures on improvements, etc	115,000	
		$415,000

Streets:	
Cost of street grading, concrete pavements, cement walks, planting, storm drains, and other developments, not including sewer and water plants, on 200 acres (including 15 acres for school, park, and community use), at $2,500 per acre	$485,000
Sewer and water plants	250,000
1,500 houses, including business group, stores, apartments, lodge and club rooms, theaters, and temporary school facilities	4,716,281
	5,866,281
Less value of land and present improvements	415,000
Total	5,451,281

Exhibit C.

BETHLEHEM.

The financial requirements to be advanced for the houses and improvements at Bethlehem are as follows:

Land:		
About 250 acres, at $1,100 per acre	$275,000	
Expenditures on improvements etc	225,000	
		$500,000
Streets:		
Grading	304,000	
Slag (macadam)	290,000	
Extension for connection with city streets	40,000	
		634,000
Sewerage system:		
Sanitary	295,000	
Storm	235,000	
		530,000
Water system:		
Reservoir mains, pumping stations, etc		286,000
2,000 houses (including lot, grading, curb and gutter, and cement sidewalk strip), at $3,500		7,000,000
Total		8,950,000
Less value of land and present improvements		500,000
Total amount to be advanced by the Government		8,450,000

Exhibit D.

HOUSING PROPOSITION OF GENERAL ELECTRIC CO., AT ERIE, PA.

NOVEMBER 23, 1917.

1. A realty company to be organized to which the General Electric Co. will deed about 300 lots near its works at Erie, Pa. The value of the property so deeded, with underground improvements, to be not less than $200,000, subject to appraisal. This will be represented by stock in the proposed realty company.

2. The General Electric Co. will take for cash at par $200,000 additional stock of realty company.

3. Government will loan $1,000,000 to realty company for 10 years at 4 per cent interest, secured by mortgage on entire property of realty company.

4. The entire $1,200,000 to be provided pursuant to the foregoing to be expended for housing accommodations on the property, the character of the houses, etc., to be subject to approval of Government.

5. At the end of three years after the termination of the war an appraisal to be made to determine the cost of constructing the buildings under the conditions as to cost of labor, material, etc., then prevailing taking the average of such costs for the 12 months preceding the date of appraisal. If this appraisal

shows a lower cost of constructing the buildings at that time than the actual cost when built, then the face amount of the Government loan secured by mortgage is to be reduced by a corresponding amount, such reduction to date from the date taken as the end of the third year from the termination of the war. Appraisal to be made by one representative of the Government, one representative of the realty company, these to choose the third member of the appraisal board.

6. Accurate records accessible to accredited representative of Government to be kept of cost of buildings.

7. Accurate records of operations of realty company to be kept accessible to accredited representative of Government.

8. Provision to be made to release property as sales of same are made, corresponding payment to be made on principal of Government loan.

9. The foregoing is based on providing accommodations for 500 families. In working out plan in detail the number of houses provided for may be less than that number, in which case the cash advance of the General Electric Co. and the amount of the Government loan would be reduced proportionally to the reduction in the event of housing accommodations from the figure of 500 on which the plan is based.

GENERAL ELECTRIC CO.,
A. W. BURCHARD, *Vice President.*

Housing.

	Amount.	Navy.	Army.	Shipping Board.
CASE I. COMMUNITY PROBLEM.				
80 per cent loan, 4 per cent, 15 years:				
Wilmington	$2,400,000			$2,400,000
Bridgeport	3,000,000	$750,000	$2,000,000	250,000
General Electric Co., Erie, Pa	1,000,000	1,000,000		
Chester Shipbuilding Co	520,000			520,000
Bath, Me., Texas Shipbuilding Co	560,000			560,000
Bath, Me., B. I. W. Co	400,000	400,000		
Chester, Sun Shipbuilding Co	2,240,000			2,240,000
600 houses, Quincy, Fore River	1,400,000	1,400,000		
Total	11,520,000	3,550,000	2,000,000	5,970,000
CASE II. ISOLATED PLANT.				
Land furnished (and underground), Government furnishes money, 4 per cent, 10 to 15 years:				
Sparrows Point	5,451,281			5,451,281
Bethlehem	8,450,000	3,000,000	4,450,000	1,000,000
Newport News	1,800,000	600,000		1,200,000
Total	15,701,281	3,600,000	4,450,000	7,651,281
CASE III. AGENCY CONTRACTS.				
Everything furnished by Government:				
Bristol, Pa	2,158,000			2,158,000
Hog Island	5,000,000			5,000,000
Total	7,158,000			7,158,000
	11,520,000			5,970,000
	15,701,281	3,550,000		7,651,281
	7,168,000	3,600,000		7,158,000
	34,379,281	7,150,000		20,779,281

Mr. HISS. Senator, we can give you approximate estimates.

Senator NELSON. Give us approximate estimates, specifying the yards, the number of houses, or the number of people you want to build houses for in each place, approximately how much land you need at each place, and, if you know, tell us what the facilities are for acquiring the land, how these employees are housed, what relation they bear to the cities in the neighborhood, how near they are, etc.

Mr. EIDLITZ. Every one of these problems, of course, has its own solution.

Senator NELSON. Oh, of course.

The CHAIRMAN. You may give us that, then, gentlemen.

(The following letter was subsequently received from Mr. Philip Hiss, and was directed by the chairman to be inserted in the record at this point:)

COUNCIL OF NATIONAL DEFENSE,
ADVISORY COMMISSION,
January 12, 1918.

Hon. DUNCAN U. FLETCHER,
Chairman Senate Shipbuilding Inquiry Committee,
Washington, D. C.

DEAR SENATOR FLETCHER: It has occurred to me that you might like to have formulated our reasons for believing there should be a central authoritative board for housing.

1. In many of the communities to be built or expanded the Army, including Ordnance and Aviation, the Navy, and the Emergency Fleet Corporation, are concerned. It is plain that the best results can not be obtained if each department finds it necessary to make a survey of needs, recommendations of building sites, and decide upon types of developments and the kind of houses. This would be wasteful and confusing both from the standpoint of administration and result.

2. The centralized committee presents an unprecedented opportunity, economically and efficiently, to plan and carry out consistent community developments with proper health, school, and church facilities.

3. Under the war emergency time is the essential element in producing these houses. Unless a central board with absolute authority is created immediately the provision of houses will be so delayed that it can not increase appreciably this year's output of ships and munitions.

Special attention is called to the necessity for granting the proposed housing board authority to commandeer raw material for furnaces, ranges, piping, bath tubs and toilet fittings, hardware and electric fixtures, etc. We are reliably informed that there are not sufficient stocks of these materials on hand, and that the manufacturers are being held up by lack of raw material. It is also important that the board be given the right to commandeer available public utilities, such as railways, waterworks, gas and electricity, because already negotiations with local companies have become difficult.

The Government also has an unprecedented opportunity to establish a method of selling houses to workmen in a way that will not tie an employee to any company or community. This can be done by the sale of stock which can be made as liquid as Government bonds. Householders could thus claim the advantages that accrue to stable citizens of a community and avoid the disadvantages of owning a house that could not easily be sold.

Undoubtedly you are familiar with every one of these reasons, but we have thought that it might prove helpful to have them definitely set forth.

Very sincerely, yours,

PHILIP HISS,
Chairman Section of Housing.

The CHAIRMAN. Mr. Coxe, of North Carolina, is here. He is interested in this same subject. I talked with him this morning and suggested that he be heard this afternoon. If he has anything to say, we will be glad to hear from him.

STATEMENT OF MR. FRED J. COXE, WADESBORO, N. C.

Mr. COXE. All I have to say, Mr. Chairman, is that I represent a group of men that, just as soon as the Government outlines a plan for this housing proposition, will want to go before the proper board and submit a proposition. I take it that this committee possibly will not have the ultimate decision in the letting of contracts or anything else.

Senator NELSON. We will not have anything to do with that.

Mr. COXE. That is what I thought.

Senator NELSON. Is there a shipbuilding plant at your place?

Mr. COXE. No, sir; there is no shipbuilding plant. My interest is simply the interest of these people that are willing to come forward and furnish a certain per cent of the cost of these developments.

Senator NELSON. What interest have they, then, in the matter outside of what there might be in the building enterprise?

Mr. COXE. It will be a community interest. We have associated a group of men at each one of these points——

Senator NELSON. Are they workingmen?

Mr. COXE. They are men that have spent their lives in work of this kind, in developing propositions; and, so far as the real estate end of it is concerned, that will be absolutely just turned over to the Government at actual cost. There is no real estate proposition in it.

Senator NELSON. And this is a matter that the workmen who expect to work in these plants are interested in themselves?

Mr. COXE. No; it is not the workmen; it is private capital that would put up this 15 or 20 per cent. I have been working on this proposition for several months, and my idea as to what the Government should do has been clearly outlined by Mr. Eidlitz and Mr. Hiss. I think the Government should get the interest of local capital in order to make this an assured success. If you induce private capital to put part of the money into it, I believe those people will work it out, and it will be worked out so the Government will get back every cent.

The CHAIRMAN. Do I understand, Mr. Coxe, your suggestion to be that instead of forming a corporation which is to take over the title to the land and give a mortgage back to the Government, your people, as a partnership, or as individuals, or as a corporation formed among themselves, would take the place of that holding corporation; you would take the title to the land and enter into a contract with the Government to put up the buildings under the supervision of the Government, and would give a mortgage on the whole property to secure the Government its 80 per cent or 85 per cent, whatever was advanced; and then you would work out this housing proposition, paying back to the Government and eventually getting back for yourselves the 15 or 20 per cent that you would advance, as well as interest on your money?

Mr. COXE. We would want the entire development scheme to be under the absolute supervision of the Government, through certain trustees that its representatives might appoint, to see just exactly how the money was expended, and let it be expended under a plan which would be adopted by the Government in every case. In other words, we would want the Government to know the expenditure of every cent of money that went into the development; then at that same time what we might term a liquidating scheme, whereby at a certain advanced price over the cost of a building it would be sold to a laborer, making these buildings in different types.

Senator NELSON. Would you have the Government regulate the rental price, too?

Mr. COXE. We would not object to that at all.

Senator NELSON. And the selling price?

Mr. COXE. And the selling price.

Senator RANSDELL. I do not know where we would find an agency in the Government to do all that. Would it not be better to lend the money to some company or community, as suggested by Mr. Eidlitz and Mr. Hiss, and let those companies operate it? It is so difficult to find the agency in the Government for all these things. We are gradually taking over the whole Nation and putting it in the Government's hands.

Mr. COXE. Do you not think the Government could furnish, say, $50,000,000 and put it in different corporations, the Government to continually have its eyes on the expenditure?

Senator RANSDELL. Possibly, but if the Government has to act as a loaning agency, giving its credit and assistance, it seems to me it ought to come under the supervision of the Government, but leave the details to be worked out by the various communities and companies.

Mr. COXE. We would want the details to be submitted to the various Government officials and approved by them.

Senator RANSDELL. You would certainly want to have the various communities run it under a Government agency, I should say.

Mr. COXE. I said under Government agency. Of course, the details, would be worked out by the local interests.

Do you gentlemen know who would likely have the making of these propositions and contracts, if the Government does assist—just who will determine it?

Senator RANSDELL. I do not think that has been settled yet.

Senator NELSON. I think it would be left to the Shipping Board or the Emergency Fleet Corporation. All we could do here in the nature of the case, would be to appropriate the money and maybe put in a few restrictions to prevent them from running wild.

Mr. COXE. The reason I asked that is that there is no use of submitting the details of the proposition until we get to the proper board.

Senator NELSON. There is no use submitting it to us.

Mr. COXE. That is what I want to know.

Senator NELSON. It ought to be submitted to the Emergency Fleet Corporation, and I suppose to the advisory committee that these gentlemen represent.

Mr. COXE. Yes, sir. We have seen various boards during the past two or three months, and nobody seems to know much about who is going to have anything to do with it. That is the proposition we have been up against.

Senator NELSON. You are in the same fix as we Senators are.

Mr. COXE. I understand.

Senator RANSDELL. It would appeal a great deal more to the board, Senator—I know it would to me—if responsible companies can come to the Government and say definitely, "Here we have so much ground; we want to build so many houses on that ground; the ground is worth so much, and the houses we are going to put up will cost us so much; and when we get it completed it will house so many human beings, to be used in specific industries at the various localities, and we want you, Mr. Government, to loan us your assistance to the extent of 80 or 85 per cent in the way of money." If that is the proposition which comes, specifically and definitely, it would appeal

very much more to me than to ask the Government to do it, because we are becoming cumbersome right now, top-heavy.

Mr. COXE. That is exactly what we have been working on for some time at these various plants, and I am sure we will be able to submit a proposition saying, "There is so much land there available. We do not own it, but it can be purchased for such and such an amount." And then we will have certain individuals from each of these communities that are responsible that will come forward and say, "We will organize a company and will work out the details of the proposition, so far as this community is concerned," letting that be done in each community.

Senator RANSDELL. That might work very well, letting the Government take the position of a big mortgage securities company.

Senator NELSON. Of course, the responsibility now, Mr. Coxe, will be limited by the stock liability. It does not matter whether a man is rich or wealthy when he goes into the corporation. It is a question of what is his stock interest and his stock liability, and a man of limited means may be just as good as a very rich man.

Mr. COXE. I understand; but the Government will want to know that the details of this proposition is going to be worked out by people who are familiar with these matters, and that they are men who have been successful in projects of this kind.

Senator NELSON. And who are willing to take stock.

Mr. COXE. And who are willing to take stock to a certain per cent and take it over.

Senator RANSDELL. I would like to ask Mr. Eidlitz a question or two, as I am sure from what he said that his idea was to have big, strong companies organized in these various communities, and the Government would merely lend its credit to these companies to the extent of 80 per cent of the entire cost of the enterprise; is not that correct?

Mr. EIDLITZ. That is correct.

Senator RANSDELL. It appeals to me very strongly. I do not want any more agencies created; we have so many now we are topheavy.

Mr. EIDLITZ. There is another point right there, not that I in any way want to interfere with Mr. Coxe. You see you have a distinct responsibility when you are going to lend the funds of the Government at less than market rate. The reason why you are doing it is on account of war, because you have borrowed it from the people at 4 per cent, so that if a war emergency exists in the fabrication of war products it is perfectly reasonable for that community to get some of that liberty loan, or what not, back at 4 per cent, the same rate that you are paying for it. But when you do that you owe a certain responsibility to the people of that locality, and that this Government can not make loans at a low rate of interest in large amounts for a long time without having labor get its reasonable share in that situation.

Senator RANSDELL. That is correct.

Mr. EIDLITZ. Now, unless we do that we are going to have a hue and cry go up in this country that will be very serious, and that end of it is what our committee is trying to serve. We go right down through the whole proposition: What is the income of this man? What is his present income? What is his normal income? How much ground can a house cover or take in connection with it to enable

that man to live in that house and be sure that he is not going to get in a situation where he can not hold it? In other words, this is a problem that has to be handled carefully and is in no sense a real estate proposition. Personally I can not see how the brother here is going to enlist capital into this proposition and make a showing which would be attractive to them.

The CHAIRMAN. In this proposal of yours, where you suggest the community put up 20 per cent, does the community ever expect to get that 20 per cent back?

Mr. EIDLITZ. They hope to. But here is the point, in most of these communities they are so put out by the lack of labor and by the tremendous losses that these manufacturers are incurring through inefficient labor and turnover that they are very willing to regard it as a simple feeder for the plant of the company, not as a housing speculation.

Senator RANSDELL. If they lose the whole 20 per cent there are other ways in which it will be recouped?

Mr. EIDLITZ. The Bethlehem Steel Co. is willing to put up a half million dollars worth of land and write it off, if it is necessary, and not share at all in any profit on that land.

Senator RANSDELL. I can understand that, but I fail to understand how Mr. Coxe can get capitalists in various communities to put up their money in an investment of the kind he describes.

Mr. COXE. Simply because of their interest in the development of their community; that is what I say. In each community—take Bridgeport, for instance; you would get people in Bridgeport that are interested in the development of Bridgeport, and any improvement that takes place they want it to benefit Bridgeport even after these munition plants are gone.

Mr. EIDLITZ. That is doing just exactly the same as other companies in other communities.

Mr. COXE. That is why I would like those people interested. It would not be some men that would take an interest in Bridgeport and some other place, but the Bridgeport people themselves would put up that 15 or 20 per cent there, not to be expended at Newark, N. J., but to be expended at Bridgeport; and they want the development to be such that when the war is over and the boys all come back from war, then those fellows have got to go back into some industries, they want to have the industries so that other industries which take the place of these will use these operatives and be the benefit of the community.

Senator JOHNSON. May I ask one question before you depart? I desire to ask it because of the receipt of a telegram this morning from California. Is there any proposition under way or have you heard of any, by which a condition precedent to employment in any shipping yard men will be required to take real estate—that is, to acquire the title or to pay for real estates in the vicinity of yards?

Mr. COXE. I have never heard of that.

Mr. EIDLITZ. I never did either.

Senator JOHNSON. As a matter of mere persuasion?

Senator RANSDELL. That was explained rather fully by one of the gentlemen who addressed the committee before you came in, Senator. They would be allowed to rent or buy—it would be purely optional.

Senator JOHNSON. The telegram I received this morning indicated it was compulsory and I could not conceive that that was the fact.

Mr. EIDLITZ. They are so anxious to get the men at the shipyards that I do not think they would put anything in their way.

STATEMENT OF MR. ANDREW FURUSETH, OF SAN FRANCISCO, CAL., PRESIDENT OF THE INTERNATIONAL SEAMEN'S UNION OF AMERICA.

The CHAIRMAN. State your full name and present place of residence and occupation.

Mr. FURUSETH. My name is Andrew Furuseth; I am president of the International Seamen's Union of America; residence, San Francisco.

The CHAIRMAN. How long have you been president of the union?

Mr. FURUSETH. For about nine years.

The CHAIRMAN. With reference to the matter of supplying seamen for the fleet, if you can give us some suggestions on the subject, we will be very glad to have you do it just in your own way.

Mr. FURUSETH. The situation in this country with reference to seamen up to about three years ago was such that there were practically no American seamen, in the proper sense. Nearly everybody who sailed either as a sailor or fireman or on deck or in the steward's department on board of a modern steamer were born in foreign countries. The number of sailors employed on the Pacific was about 5,000. The number of natives among them was less than 3 per cent. On the Atlantic the number who sailed were probably about 20,000, and the number of natives among them 10 per cent, as near as I could get it.

The CHAIRMAN. That was up to what time?

Mr. FURUSETH. Up to about three years ago.

The CHAIRMAN. How about the officers?

Mr. FURUSETH. The officers in the merchant marine were always up to that time citizens of the United States, a very large percentage of them—I do not know how large a per cent were naturalized citizens. Capt. Westcott here can tell you that. He knows more about the officers question than I do. Quite a large percentage of them, however, were born in foreign countries, but all had become citizens of the United States.

About three years ago, on the 4th of March, 1915, the seamen's act was passed. The purpose of the so-called seamen's act was to so change the condition that the native could be induced to come to sea. Since that time there has been quite an extensive increase in the native element; not as much as there would have been if the act had been properly enforced, but there has been quite a considerable increase. And last June a census was taken from our records. When a man joins the union we ask his nativity, his age, the name of his nearest relative, whether he is a citizen, etc. In the month of June, last year, I sent out here from Washington for that information to all the different branches of the organization. I found then that on the Pacific there were 6,669 able seamen.

The CHAIRMAN. How many of them members of the union?

Mr. FURUSETH. All of them—90 per cent of the men sailing were members of the union. We found that on the Great Lakes there were 4,279 able seamen members of the union. That would be about 50 per cent of the total amount of the men employed on the Lakes—50 per cent, about, was organized. We found that on the Atlantic there were 7,956 able seamen in the union, and that was less than 50 per cent sailing on the coast, out of the different seaports and sailing under the American flag on the Atlantic coast.

With reference to firemen, we found about 3,000; cooks, 2,800, using round numbers; firemen on the Lakes, about 4,500; cooks on the Lakes, about 1,000; and the firemen on the Atlantic, 6,500 in round numbers; cooks on the Atlantic, in round numbers, 6,500. These figures represent 90 per cent of the men sailing out of Pacific coast ports. About 50 per cent of the men sailing out of Great Lakes ports generally and about 50 per cent, or a little less than 50 per cent, of the men sailing out of Atlantic coast ports, from Maine to Galveston.

This law provided that 50 per cent at least—in the first year, 40 per cent; in the second year, 45 per cent; and the third year, 50 per cent—of the men employed on the deck department of steamers must be able seamen, and that 75 per cent in each department must understand all kinds of orders given by the officers. If this last part of section 13 of the act had been carried out, if that law had been enforced during the three years that have passed, or two years and nine months, since the law has passed, you would have had no trouble now or practically no trouble at all about the men for the present emergency. You would have had the necessary number of Americans, or so nearly so that by dilution you could have the necessary number of men for taking care of the fleet, not only the present fleet, but the emergency fleet. Unfortunately, that was not done. It was so construed that they simply continued to carry to some extent Chinese and Hindus, and Cromen from the Pacific coast. Cromen are Spanish-speaking South Americans. They have continued to employ those men.

There is another reason why we are up against some difficulty now and that is this: That the law comtemplated that there should be an opportunity for the young American to come to sea and to learn. That is why the law was arranged in such a way that the first year 40 per cent should be able seamen; in the second year, 45 per cent; in the third year, 50; in the fourth year, 55 per cent; and in the fifth year, 65 per cent, and that would be permanent after that, so as to give, as you understand, a certain number, two-thirds finally, of men who really know their business, and one-third who were there to learn all the time.

That part of the law has not been carried out by the shipowners. They have employed practically exclusively able seamen. With all of those drawbacks and difficulties there is not any question but what if the proper steps are taken the country can find men to take care of and sail the ships. There are several things, however, which have got to be done in that matter.

There is another phase of it. You have talked about the housing question here. Improvements in the forecastle were provided. The construction given to the law was that it applied to no vessel except

those built after November 4, 1915. We took that matter up with the department, appealed it to the President, and he sent it to the Attorney General, and the Attorney General held that it applied to vessels built after March 3, 1897, which would make more than one-half of the then vessels afloat. Rules and instructions were given out accordingly, but a corporation took the matter into court and got a decision that it applied only to vessels that were built after November 4, 1915. An appeal was ordered taken from that, and that appeal is still pending. So that there is practically nothing done to improve the forecastle conditions, and those conditions, as I have said before this committee many times, were such that no man would care to stay in those forecastles if he possibly could avoid it. Of course, the conditions in the new vessels have been improved upon, and the new law as it was passed by Congress is in operation there.

With reference to the number of able seamen—and that is the most important phase of it and most difficult phase of it—the report of the Supervising Inspector General of the Steamboat-Inspection Service for 1917 says that in 1916 they had 24,425 certificates of able seamen issued, and in 1917 13,304 able-seamen certificates issued. That, if you will notice, makes something like 37,000.

Senator HARDING. May I ask a question right there?

Mr. FURUSETH. Surely.

Senator HARDING. Does the seamen's union prescribe a certain training or qualification for admission to membership?

Mr. FURUSETH. No. Our first proposition was this: That anybody who was good enough for the shipowner was good enough for us; second, the Congress enacted the law that a man should not be entitled to an able-seaman's certificate until he has served three years at sea; that, of course, has been upheld very generally. If you mean, Senator, do we examine men when we take them in?

Senator HARDING. If I get you correctly, I suppose your relationships with the shippers or the ship operators are very similar to that of the printers' union, which I have to do with, and you enter into an arrangement, for example, to furnish them needed help?

Mr. FURUSETH. We do in some instances—not to furnish them, but——

Senator HARDING. Would the union certify a man for service on an outgoing ship if he had no experience?

Mr. FURUSETH. No.

Senator HARDING. I just read the other day from a document, which I am not able to quote from just now, of a seaman being certified for service on the trans-Atlantic shipping who really could not understand English terms and had no experience at sea whatever.

Mr. FURUSETH. If he had an able seaman's certificate, Senator, that is just what we complained about, because they issued the able seaman certificates to men who could not understand the language and who could not do the work, and we complained about it, and it is done under the construction given to section 13 of the seamen's act, and this was by the inspection department under rules issued by the Department of Commerce. I wrote a carefully prepared article or treatise, or whatever you may call it, and it was made a Senate document, No. 694. If a man is certified as able seamen, that is not done by us; that is done by the inspection department, by the

inspectors in the different ports. The trouble with it is that section 13, which provides that no man shall be given a certificate of an able seaman unless he has had three years' experience, and the other part of it is that 75 per cent at least of the men employed must understand all orders given by the officers, has been so construed that some men may have got certificates as able seamen that were not entitled to them, and we know that men have got certificates of able seamen that could not understand English. They construed it in that way for some unearthly reason we could not understand. I give you an instance of that——

Senator HARDING. I want to be fair. I asked you the question because I had understood that the union was certifying some of these inexperienced men, and I want to get your opinion of it.

Mr. FURUSETH. No; we do not certify anybody. If the Shipping Board say—which I will come to by and by; they have special arrangements in New York—to our men who are picking up men for them, "This vessel wants so many able seamen; she wants so many ordinary season—so many boys, so many cooks, so many stewards, so many bakers, so many firemen, oilers, and water tenders." This agency that the Shipping Board is running in New York will furnish those men. They will furnish them with our assistance all the time. We assist them in every way that we can to find those men. They are not shipping exclusively union men at all, Senator. They are shipping all kinds of men. If a man comes along there with a certificate of able seaman, and he succeeds in imposing upon the people who are providing the men for the ship, then that is the fault of the people who issued the certificate, not the fault of the union in any way. The fact of the matter is that we have been trying our very utmost——

Senator HARDING. To fix the standard?

Mr. FURUSETH. To fix a standard and to see that the standard be lived up to, but we can not fight the United States Government on that question, and we can not fight the Secretary.

Senator HARDING. You would not think it prudent for any organization to fight the Government in this emergency, would you?

Mr. FURUSETH. Certainly not.

Senator HARDING. I want to ask you, in passing, whether the hazards making the trip through the war zone is having a deteriorating effect on the sea occupations?

Mr. FURUSETH. It depends entirely upon the men. I will come to that in a minute.

I would like to have you Senators contemplate this particular thing about section 13, because it is dead, practically now, and being dead it works very largely against getting the right kind of men. It is in this document here. We come now to the number of men. It seems that we should have now at the present time in the coastwise trade and in the foreign trade about 36,000 men with able-seamen certificates; that is the number of certificates that have been issued; there is not as many as that employed, however, so that there is not only a large number of able seamen in this country that have no certificates, men who left the sea and went into shore employment—and there are thousands of them—and they can be got if it is gone at right; but there are also a large number of men with

able-seamen certificates who are now working in some other employment, or a certain number were conscripted or drafted in the Army. The men are here, the men can be found, and the question is how to find them.

Senator HARDING. I want to ask a question right there. Are not the seamen exempt from the Army draft?

Mr. FURUSETH. No; they were not. The law provided that a seaman actually employed might be, and so a seaman actually employed at the time was sometimes exempted and sometimes not. But a seaman ships in a vessel to go on a certain voyage. He comes back again and he is discharged from that vessel. Now, he is idle for perhaps three or four days, or perhaps two weeks, before he gets another job, and in that period of time he could not make an affidavit that he was a seaman actually employed.

Senator HARDING. Would not his application for a job to sail be a guard against that condition?

Mr. FURUSETH. It was not so considered. They went to the extent of taking them directly out of the vessel, and not only sailors and firemen, skilled and experienced men, but even officers of vessels were taken this way.

Senator HARDING. Where was this done?

Mr. FURUSETH. All over the country. We took it up later with the authorities.

Senator HARDING. How do you account for that?

Mr. FURUSETH. Why, because of the local boards. They were extremely anxious to find a quota.

Senator HARDING. You would think, would you not, that a seaman's task was even more hazardous than that of a soldier?

Mr. FURUSETH. Well, it is certainly as much so, going across the Atlantic and carrying munitions. But lately, within the last few weeks, Gen. Crowder has issued an order that any mariner, and including in that order all the officers of vessels as mariners, they shall be put in class 4, and that the fact that they are temporarily unemployed is not to be considered, but that if they are bona fide seamen, following that as a vocation, they shall be put in class 4, and that unless they are ashore more than 20 days they shall remain in class 4, and if there is good reason why they shall remain more than 20 days on shore they will still remain in class 4. So that under the new rules issued by the Provost Marshal General, the seaman, when it is gotten into shape, will be exempted for Army draft as long as they continue to go to sea, and that is as long as they ought to be.

Senator HARDING. Do you think that shore leave of 20 days is a fair one?

Mr. FURUSETH. For the man on the coast, yes; for the man on the Lakes it would not be, because you see there is a period of time of closed season on the lakes. And he issued a different order with reference to the Lakes, covering the closed season. So that the Provost Marshal General has really done all that could be properly expected and that was fair to do. We have not got any complaint about that at all as it stands now.

There is another matter which has been working very seriously against getting the Americans to sea and that is this: Since the month of November there has been what you call searching squads,

made up of a naval officer and some men—I do not know who they are—who come aboard the vessel in the last 20 or 30 minutes before she is ready to go, and examine the crew and take all the men ashore because they do not have the necessary papers. In order to get the necessary papers they would have had to have passports. These passports were issued by the collectors of customs. The men born in the United States simply came up and said, "I am an American." "Well, I do not know whether you are or not. You have got to prove that." "How can I prove it?" "Well, with a certificate of birth." Those men could not furnish that certificate, and as a result they were driven off. They have made a change in that so that instead of furnishing a certificate of birth, an affidavit of some responsible citizen may be taken as an evidence of nativity; at least they are preparing for that, and they have begun to operate it in New York, I was told just this afternoon; and that difficulty is now about to be cured, effectually cured, I should say.

There is one other matter I want to call your attention to, because a tremendous number of officers are needed, and in that question I again suggest that you hear Capt. Westcott.

In order to get officers the men must first be sailors before they are officers; they must first be firemen or oilers or watertenders before they are engineers; they must have some experience, in other words. The law provides for their experience as a matter of common sense, and they would not be any good if they did not have it. A large number of skilled seamen, so far as their citizenship permitted them to do it, of course, have gone from the deck to what we call the bridge, that is, from that of an able seaman to that of an officer on a vessel, third mate, second mate, fourth mate, or whatever it might be; and, of course, that to some extent depletes the number of able seamen. But there was not any difficulty on that question, the actual number of officers was much underestimated, and, as it stands now, men are permitted—a lot of certificates have been issued, provisional certificates to noncitizens. Of course, the native American who watches that says, "Well, what is the use of me trying? They want him; they don't want me." So that militates against the boy going to sea and against the American taking full charge. What remedy you can have for that I do not know.

Now we will come to the proposition that we made to the Shipping Board.

The CHAIRMAN. First, Mr. Furuseth, you have given us about the number of able seamen certified and a general view of the situation. You have heard the estimates of the Shipping Board about the number of vessels ready to go into service, etc. Do you think we can supply the necessary men, and how many more men would be needed for it?

Mr. FURUSETH. If Mr. Ferguson is right in regard to 3,000,000 tons, I should say 6,000 sailors; if it is 4,000,000 tons, it would take about 8,000 sailors, half of them able seamen, half of them seamen; and I have not any doubt that they can be obtained. I have not got any doubt at all, assuming that things are done that is necessary to be done to get them, and that is what I want particularly to get to your attention.

The CHAIRMAN. Give us your views in reference to that.

Mr. FURUSETH. We have, of course, watched this situation for years. I think I might say that I have repeatedly to your knowledge made the statement that some day the United States will have a war and they will find themselves needing the men. We seamen always believed that the war was coming, felt sure it was coming, and so I dared to say those things. As soon as we got mixed up in it, I went to the Shipping Board to see Mr. Denman. Mr. Denman is from San Francisco. I have known of him for a considerable time, many years. He used to be attorney for the big ship corporations out there that were fighting the seamen, but that did not cut any figure. I went to him, and I laid a proposition before him. I said to him this: There are thousands of able seamen throughout the United States, a very large number of those men are unmarried; they have left the sea because of the conditions that existed, but they have had a very great interest in the sea. That the seaman has been very anxious to change the status, to get the seaman's act passed. These men were working, a large number of them, in the building trades, and in other trades, where the employment will fall off during the war. Those men, if not married and if not settled down so as to be tied up, will, upon the proper application made to them, or the proper arrangements made, come back to the sea. If an arrangement should be made between the shipowners and the seamen for certain improvement in the conditions, and if the seamen and the shipowners could sign a joint call, and this joint call were countersigned by the Shipping Board, and its call for those men to come back to the sea now because they are needed there, I am satisfied that thousands of them would come.

In the same way, I am satisfied that you can get all the young men that you need to come to the sea to learn seamanship, providing they will be given an opportunity, providing the shipowners can be induced to put young men on their vessels, so that they can learn and can issue instructions to their officers to give those young men the best kind of opportunity for learning. Then, we, on our side, will guarantee that we will do everything that can be done to teach those men seamanship, the work of a seaman, in the shortest possible time so as to make him useful and valuable to the country.

Mr. Denman discussed that question with me. He said for me to come back in a couple of days, and then he asked a lot more of questions about it. Then he took it up with the shipowners from New York, and on the 8th of May a meeting was held in the Shipping Board's board room, beginning at 9 o'clock at night and ending at half past 1 in the morning. We then came to a tentative agreement, largely, I must say, under the pressure from the Shipping Board, and on that question, in order to get full information—information I have not got—you might hear Mr. Denman, if he might be induced to testify. Some of the shipowners, such as Mr. Franklin, I sized up at that time as being willing to do these things. There were other shipowners there who were absolutely opposed to it. It took them until the 6th of June to agree to it. The first condition was that they should give passes to officers of our organization to go on the decks of vessels to see the men at times when it would not interfere with the men's work.

Manifestly, it will be impossible to get the seaman in a frame of mind to cooperate if you can not bring the information and the facts to him. So Mr. Franklin agreed; others finally by the 6th of June agreed, at least the majority of them did. There are only two or three who have not done it. Then when they had agreed to that I went along the Atlantic coast as far down as Galveston, and called the men together, those who were on shore, and those I could get a hold of, men in port, either at work or unemployed, whether union or nonunion, and explained the whole method of it, the need of the country, the use the seamen could be put to, what the seamen could do, and what the Nation would expect of them under the circumstances, and I asked those who were members of the union to take a vote upon it and let me know exactly what they had to say about it, whether they would consent to this tentative agreement, which had been entered into. The vote came in before July 1, and it was 98 per cent in favor.

Then the shipowners did not arrange for it fully, because they wanted some arrangements with the marine cooks and stewards, then employed in the stewards' departments. Then came the differences and the reorganization of the Shipping Board, and nothing was done further until a meeting on August 1, called by the Secretary of Labor and the Secretary of Commerce together. That meeting went into what could be done in this matter to some extent, and they appointed a committee of 15: One man representing the Labor Department, one representing the Department of Commerce, and one representing the Shipping Board; six shipowners and six seamen, made up of sailors and officers, etc., and we met on the 8th of August and came to a final agreement that was signed then, and then afterwards, on the same day, was approved of by the Secretary of Commerce and the Secretary of Labor. If there is no objection, I will read that to you:

The representatives of the steamship lines and of the organized seamen agreed with the Shipping Board that some action ought to be taken looking to an increase in the number of seamen in order to furnish men for the vessels trading to England and France carrying supplies and to yet continue an uninterrupted coastwise trade.

To attain this purpose the representatives of the shipping lines in cooperation with the Shipping Board and the organized seamen tentatively agreed to cooperate for the attainment of this end in the following manner:

Substantially all the steamship lines will agree to pay the following wage: Sailors and firemen, $60 per month; coal passers, $50 per month—

That, I want to say, was the then established figures and had been the established figures since about the 1st of April, so that there was no increase in wages here at all contemplated.

The CHAIRMAN. That was last year?

Mr. FURUSETH. That was last year.

Senator HARDING. Before you get away from that, just let me ask this for information: What was that signed in 1914, for example?

Mr. FURUSETH. Before the adoption of the seaman's act?

Senator HARDING. I do not mean before the seaman's act.

Mr. FURUSETH. Well, in order for you to understand this matter I put it in that way. The standard of seaman's wages at the time on Atlantic coast ports was $30 a month; fireman's wages, $40 a month, prior to the seaman's act coming into operation on the 4th of November, 1915. For the month of February, 1916, there was

an increase in the wages of $5. On the 1st of April, 1916, the wages were increased to $45.

Senator NELSON. For sailors?

Mr. FURUSETH. For sailors; and $45 a month for firemen; the same wages for both. And by that time the wages on foreign vessels coming to the Atlantic coast ports became the same. The men left the vessels they were in and shipped over in the same or some other vessel at the wages of the port, and it did exactly what we said it would do, it equalized the wages of foreign and American vessels leaving ports of the United States. Then those wages stood until the 1st of April, 1916, and then the wages were advanced to $60 per month for sailors, $60 per month for firemen, $50 for coal passers; and you will notice there are no ordinary seaman's wages, because they did not carry any; oilers and water tenders, $5 more.

Senator NELSON. That was double what it was in 1915, then?

Mr. FURUSETH. It was double what it was in 1915.

Senator HARDING. When did the war premium go on?

Mr. FURUSETH. The war premium went on in the early part of 1917, 25 per cent.

Senator HARDING. After the resumption of the German submarine campaign?

Mr. FURUSETH. Yes. But in the month of April, 1917, it was privately agreed between the seamen and shipowners that there should be a 50 per cent more bonus for going across the Atlantic, going into the war zone, as it is called.

Senator HARDING. You mean between the union representatives and the shipowners?

Mr. FURUSETH. Yes; the shipowners simply accepted that, this arrangement before the Shipping Board—simply accepted the conditions as to the wages and war bonus as it then existed.

Senator NELSON. That means $60 and $50 besides, does it?

Mr. FURUSETH. No; $30 besides—$90.

Senator HARDING. You say that was accepted. You mean by that that the Shipping Board, as I understand, with the union—that all ships under control of the board would pay the wages which were then agreed upon between the shipowners and the seamen privately?

Mr. FURUSETH. In other words, the commercial wages.

Senator HARDING. But not distinctly a closed shop?

Mr. FURUSETH. You will find as you read there is not a trace of the union or nonunion in it.

Senator HARDING. Just a standard of wages?

Mr. FURUSETH. It was not a question of union or nonunion. We could, of course, in certain instances have raised that question.

Senator HARDING. Did the addition of the 50 per cent have a tendency to minimize or neutralize—what shall I say—the unpopularity of the employment?

Mr. FURUSETH. Here is the real facts to those things: First and foremost, a man going into that war zone, on every vessel that is torpedoed—and quite a number have been, and they had quite a lot of experience before we got into the war—the usual loss of men was something like 30 per cent—3 out of 10—some vessels as much as 7 out of 10. The men knew what risks they were taking when they went with these vessels, perfectly well knew, and they said

"Well, we will go in these vessels." They did it before they got the war bonus. They said, "We will go in these vessels, because we owe something to those people in this country for passing this law which made us free."

Senator HARDING. I do not want you to misconstrue me. I would not think it was enough.

Mr. FURUSETH. That is another phase of it. The thing became so frequent and the men had so much losses and the best kind of men only were willing to go; that is to say, when you made up a crew for one of those vessels which were going across the Atlantic with munitions or going into the war zone the men would get together and look at each other and say, "No; I won't go in that vessel on that trip." Or in a crew of 10 or 12 men there might be 3 or 4 men in that crew who would say, "I will not go with that man; that man is no good, I can not trust him." So they gradually selected out a crew of men who were willing to take the risk; they trusted each other. They knew they could do whatever man could do, with reference to handling the boats, and they knew each other well enough to know they had the nerve that was necessary. But, of course, men were being lost, and they thought there ought to be—in Europe they were paying a war bonus, in every European country—and the men said, "We ought to have a war bonus here." "All right," the shipowners said, "we will agree to a 50 per cent war bonus and $100 for loss of clothing." All that was arranged for before the Shipping Board got into it. The condition as it then existed, in other words, was taken up and indorsed, with this distinction, that as you read it here:

MEMORANDUM.

WASHINGTON, D. C., *August 8, 1917.*

The conference between the Shipping Board, Committee on Shipping of the Council of National Defense, and representatives of the International Seamen's Union was called to order at 9.30 p. m., May 8, 1917. Chairman Denman, of the Shipping Board, was in the chair. Those present, in addition, were Vice Chairman Brent, Mr. White and Mr. Stevens, of the Shipping Board; Mr. Raymond, of the Atlantic, Gulf, and West Indies Steamship Lines; P. A. S. Franklin, of the International Mercantile Marine; Mr. Munson, of the Munson Line; Mr. Bull, of the Bull Line; Mr. Sherman, of the Grace Line; Mr. Warden, of the Standard Oil Co.; Commissioner Chamberlain, of the Bureau of Navigation. Representing the organized seamen, President Furuseth, of the International Seamen's Union, H. P. Griffin, G. H. Brown, Oscar Carlson, Dan Ingraham, and P. J. Pryor.

A general synopsis of the conference was as follows:

The representatives of the steamship lines and of the organized seamen agreed with the Shipping Board that some action ought to be taken looking to an increase in the number of seamen in order to furnish men for the vessels trading to England and France carrying supplies and to yet continue an uninterrupted coastwise trade.

To attain this purpose the representatives of the shipping lines, in cooperation with the Shipping Board and the organized seamen, tentatively agreed to cooperate for the attainment of this end in the following manner:

Substantially all the steamship lines will agree to pay the following wage: Sailors and firemen, $60 per month; coal passers, $50 per month; oilers and water tenders, $65 per month; boatswain, $70 per month; carpenters, $75 per month; overtime pay for cargo work, 50 cents; for ship work, 40 cents per hour. Bonus going to the war, 50 per cent of the wages, wages and bonus to continue until crew arrive back in the United States; $100 compensation for loss of effects caused by war conditions. The scale of wages and bonus for

cooks and stewards at present in force to be maintained and continued during the continuance of this agreement.

That a certain number of boys determined by the number of men carried are to be employed in addition to the usual crew; that a number of ordinary seamen will be employed in proportion to the able seamen carried; taken as an instance a vessel now carrying 8 men on deck will carry 6 able seamen, 2 ordinary seamen, and 2 boys, such boys and ordinary seamen to have ample opportunity to learn the work usually demanded of able seamen.

The Shipping Board vessels are abiding by that arrangement; practically nobody else is.

That the representatives of the organized seamen shall have access to and be permitted on docks and vessels during reasonable hours.

The representatives of the seamen tentatively agree to join with the shipowners in an appeal to seamen now employed on shore to come back to the sea.

That the bonus and other conditions arising from the war shall terminate with the war and that the wages set shall remain for one year to the end that wages be stabilized and that the men now on shore may be induced to return to the sea.

That the seamen will use earnest efforts in cooperation with the officers to teach seamanship to the boys and ordinary seamen.

That the representatives of the organized seamen reported that this agreement had been put to a vote of their unions and ratified by their membership.

That this agreement is hereby ratified and confirmed on the 8th day of August, 1917.

P. A. S. FRANKLIN,
FRANK C. MUNSON,
ERNEST M. BULL,
D. S. WARDEN,
L. A. SHERMAN,
W. H. RAYMOND,
R. B. STEVENS,
Vice Chairman United States Shipping Board.
ANDREW FURUSETH,
H. P. GRIFFIN,
PERCY J. PRYOR,
G. H. BROWN,
OSCAR CARLSON.

Approved August 17, 1917.

WILLIAM C. REDFIELD,
Secretary of Commerce.

Approved August 17, 1917.

W. B. WILSON,
Secretary of Labor.

That was entered into. Now, on that same day——

Senator NELSON. That is, in August?

Mr. FURUSETH. That is in August.

Senator NELSON. In August, 1916?

Mr. FURUSETH. August, 1917; and on that same day the draft of a "Call to the Sea" was adopted and signed by the chairman and the secretary of the committee, the chairman of the committee being Supervising Insp. Gen. Uhler, and the secretary of the committee was A. Warner Foraker, law officer of the Bureau of Immigration, and a member of the committee for the Department of Labor.

I would like to read that call for you, showing this to you, that, of course, signing it by the shipowners on the Atlantic coast was of very little consequence. It is really a national affair, and to really get back the men it has got to be signed by the men from the Lakes and men from the Pacific. So as soon as I could get foot loose I went to the Pacific coast, and I took it up with the sailors on the

Pacific and the firemen on the Pacific, and everybody of the seamen there, and they agreed to it. Then I took it up with the Shipowners' Association on the Pacific, and they agreed to it. They are willing to sign it at any time when it is perfected and to use it. Of course the shipowners on the Atlantic and the shipowners on the Pacific had the same thing to say to these things—that is, the question of finding a room for those two or three or four men for the vessel. My answer to that was, "There is not a vessel of over 200 tons you can not find that room on if you want to at very small expense," and considering they are making, as they say themselves, "oodles" of money they surely can find means of doing that if they really want to. If this agreement had been carried out all over the country, you would have had at the present time at least 10,000 sailors with an experience running from five to eight months, and it should be worth something to you.

Senator HARDING. I wish you would clear up a little density in my mind. Did the seaman's agreement increase the number of seamen on a ship?

Mr. FURUSETH. No; it does not—yes; it did in another way: If the vessel carried eight sailors, able seamen, the agreement was that they should put two young fellows on who had never been to sea before in addition.

Senator HARDING. That was done to educate them?

Mr. FURUSETH. Yes. Then, in order to equalize the cost, take two of the able seamen off, put two ordinary seamen on and two boys, making it, say, eight instead of ten. But the cost, so far as wages was concerned, would be practically the same, because the ordinary seaman and boy would get less wages, but it takes up a certain amount of space, do you see?

Senator HARDING. Were the Pacific coast and the Atlantic coast practically the same?

Mr. FURUSETH. The Pacific coast was $55 a month for the last three or four years. We asked last spring for $5 increase and made the wages on the Pacific coast and the wages on the Atlantic coast the same. We did that for the purpose of holding the wages, if we could, the same over the country, so that in passing from one coast to another and one place to another there would not be any real inducement to pay men's passage or making it difficult to get men to go from one place to another.

Senator HARDING. Of course, you have no war bonus on the Pacific?

Mr. FURUSETH. No. The "Call to the sea," can be signed now, except for the Lakes——

Senator NELSON. What is the trouble about the Lakes?

Mr. FURUSETH. The Lake Carriers' Association, under the leadership of Mr. Coulby, the president of the Pittsburgh Steamship Co., absolutely refused to sign it or to give any passes. He says it will lead to the unionizing of the men. My answer is that they will ultimately be unionized, if the men are willing; but you could not prevent that anyway. He was called down here to Washington—I think it was on the 14th day of August——

Senator HARDING. By whom?

Mr. FURUSETH. By the Secretary of Labor and the Secretary of Commerce; and Mr. Livingston came, together with another shipowner from Chicago, and a lawyer from Cleveland.

Senator HARDING. That is the president of the Lake Carriers' Association?

Mr. FURUSETH. They said: "Mr. Government, we have not any trouble with our men."

I was present at the interview. "Leave us alone. We are doing everything that is necessary and everything that can be demanded of us. We are bringing down the coal and bringing down the ore and bringing down the wheat faster than anybody could bring it down, and you will please leave us alone. We will have nothing to do with this proposition." On the same day, without me knowing anything about it—I did not have the faintest idea there was that situation—there was a meeting of this organization of seamen in Chicago—sailors and firemen—and they put this up to the Lake Carriers' Association: "You will either agree to the Atlantic agreement or we are going to strike on the 1st of October." Now, mind you, on the Lakes the division of the crew is right. There are so many able seamen and so many deck hands, as they call them, ordinary seamen. But they do not live up to the seaman's act; they do not have these men go watch and watch. They keep them on deck in the daytime for scrubbing and other things; they do not keep them on watch in the nighttime; they do not require them to keep a lookout at night, they do not require them to do a seaman's work, and they might continue that six or eight months without knowing any more than they did when they began, except they might have developed sea legs a little better than they had before.

Of course, to make this of any value, in order to comply with a training scheme, the men must be divided into watch and watch, and they must be working with able seamen so as to learn the able seaman's work, so that the able seaman can have an opportunity to teach them. They would not do that; and then the seamen up there said, "Here, you will agree to this by the 1st of October or we are going to strike." They put that to a vote, and 95 per cent of the organized men around the Lakes, which amounts to something like 3,000 sailors, and about an equal number of firemen, voted in favor of it, and the vote was published. The Lake Carriers' Association officers and the officers of the Lake Seamen's Union were called down to Washington, and Mr. Stevens, of the Shipping Board, tried to harmonize the difficulties. It was finally agreed that what we called the "welfare system of the Lakes"—welfare book—should be abolished. And in consideration of that the men—there were only two months left of the season—continued to go on sailing.

Senator NELSON. What was the "Welfare matter?"

Mr. FURUSETH. The welfare matter was that the Lake Carriers' Association organized an association called the Welfare Association, in which they compelled the seamen employed by them to be members, charged them a dollar, gave them a pass to go on, a pass book, and they leave a space in which the master or the engineer of the vessel puts in his opinion of their skill and conduct, etc., and if their skill and conduct is not sufficiently satisfactory to them, he collects the book and sends it to the Lake Carriers' office, and the man, of course, is blacklisted. We look upon it as a pure blacklisting plan. It was never anything else. It was the same system as used on the

ships of Great Britain, which caused ultimately the strike of all the British seamen in 1911.

And if the strike had not been stopped, in spite of what Mr. Coulby thought, this Lake fleet would have been tied up. He thought we did not have any union man on board of his vessels, but we had more than he was aware of. But the men said to Mr. Stevens, of the Shipping Board, "Upon your request and your promise that you will see to this thing and take this matter up and deal with it, we will sail."

Senator NELSON. He said, "If you will take out the Welfare book"?

Mr. FURUSETH. He said, "I will see that the Welfare book is taken away."

But later I was present at a meeting here with the Lake Carriers' Association and Mr. Coulby was then present, and Mr. Coulby again said, "No; I will not sign any such agreement; I will not be a party to it, because it will help to bring about unionism of the men on the Lakes." In other words, as I put it to him then, I said, "You would be willing to do whatever is possible, but you would not give us any of your prejudices in this case." That is surely a matter of prejudice; that is all there is to it.

Well, without him signing it and coming into this thing, we fear seriously that it will not be a success, because the Lakes are the best recruiting ground for young Americans for going to sea that there is in this country.

The CHAIRMAN. If you will suspend, Mr. Furuseth, the committee will now adjourn until 2 o'clock Monday, when it will be pleased to have you resume your statement.

(Thereupon, at 5.10 o'clock p. m., the committee stood adjourned to meet at 2 o'clock p. m., Monday, January 14, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

MONDAY, JANUARY 14, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, Vardaman, Shields, Martin, Simmons, Nelson, Jones, Sherman, Harding, and Johnson.

Senator JONES. Before we proceed with Mr. Furuseth, I have here two telegrams, one from Philip D. Sloan, of the Sloan Shipping Corporation, and the other from Joseph A. Sloan, with reference to the testimony that has appeared heretofore. I want to ask that these two telegrams be put in the record. These gentlemen also ask for an opportunity to appear before the committee. I assume that the committee probably will not finish these hearings for about a week, so that they will have plenty of time to come here, and that the committee will hear them if they are here before we close these hearings. I wanted to know whether I could advise them to that effect.

Senator NELSON. What do they propose to testify about?

Senator JONES. About this Sloan Corporation matter. They claim they want to disclose all the facts with reference to it.

The CHAIRMAN. We have some witnesses to appear Wednesday, I believe, and suggestions about several other witnesses. I doubt if we will be through within less than a week or 10 days. How much time would they want?

Senator JONES. Of course, it takes four or five days in ordinary times to come here, but the mails now take nearly a week. I do think these people ought to have an opportunity to be heard, in view of the testimony that has already been presented in reference to the Sloan Corporation. I think it would be only fair to them.

I ask that these two telegrams be put in the record.

(The telegrams referred to are here printed in full, as follows:)

SEATTLE, WASH., *January 11-12, 1918.*

Senator WESLEY L. JONES,
Washington, D. C.:

Portland Oregonian of Wednesday morning, under heading "J. Rufus outdone in Sloan scandal," prints purported transcript of Admiral Bowles's testimony before Senate investigating committee. Testimony contains many palpable mistakes and inaccuracies and puts the officials of the Sloan Shipyards Corporation in a false light. For example, statement that, though Government has paid company $1,740,000, only 3 per cent of contract work has been done. This ignores fact that we have also paid on contracts for machinery, equipment, and material for ships more than $1,000,000. Stress is laid on contract with Premier Engine Works and assumes that all of the engines for 16 ships were

let to this company, whereas only 4 of the 16 engines were contracted for and only $20,000 advanced on same. This morning's Portland Oregonian, under heading "Details of Sloan scandal exposed—Architect Ferris tells of big deals—United States is cleverly swindled—Witness shows how negotiations were put through—Fat commission landed—Shipping Board officials admit part he played in having contracts at enormous figures placed with irresponsible concern—Again stress is laid on vessels under contract for the Clinchfield Co. at $385,000, being afterwards made part of the contract with the Shipping Board at $490,000." Ferris has testified his standard ship for the Shipping Board would cost to build considerably in excess of the original ship for Clinchfield.

In addition to that, in the period of time between the signing of the contract with Clinchfield and with the Shipping Board, the price of material and labor had undergone an unprecedented advance. For example, lumber per ship advanced $10,500, and the price with the Government was not unreasonable or unfair. This is evidenced by the fact that the Shipping Board let contracts to Standifer Co., of Portland, and others at about this same time at equally as high a price, and within the past two months has let contracts to Meacham & Babcock Co., of this city, for the same type of ship at a contract price of $955,000. Also Capt. Blain, Shipping Board district officer, is on record in Washington that these can not be built for $443,000 apiece.

Stress is laid on the presumption of no investigation of the yard or the ability of the company to perform such an important contract had been made. In April, previous to the letting of these contracts, Theodore Brent, vice chairman of the Shipping Board, visited the plant of the Sloan Shipyards Corporation at Olympia and was very favorably impressed with the yard and its ability to handle this work. See Brent's report of Pacific coast trip and copies of telegrams, which should be on file. The yard is conceded by shipbuilding experts to be one of the very best laid out and equipped wood shipyards in America. Neither myself or other officials of the company have anything to hide or cover up, and in view of the above misleading statements, and as it always has been and is now our desire to aid the Shipping Board in every way possible in the production of ships, I respectfully solicit an opportunity to appear before the Senate committee of which you are a member.

PHILIP D. SLOAN.

SEATTLE, WASH., *January 11, 1918.*

Senator WESLEY L. JONES,
Washington, D. C.:

Supplementary to the telegram of this date sent you by the Sloan Shipyards Corporation, the following statements in reference to myself and the Anacortes Shipbuilding Co. appears at this time very necessary. I am a practical builder and designer of wood ships, with more than 35 years' actual shipyard experience and of recognized ability with men familiar with this line of work. Twenty years of my life have been spent on the Puget Sound. I am not an official of the Sloan Shipyards Corporation and have nothing to do with its management other than being employed in a consulting capacity in the laying of and supervision of the construction of its plant at Olympia. At the beginning of last year was engaged in the business of consulting shipbuilder and architect, and there is at present building and has been built more than 25 wood vessels from my plans, receiving the highest rating for wood ships of their class in Lloyd's Bureau, Berits, and American Bureau of Shipping. April last I offered my services to the Shipping Board through Vice Chairman Theodore Brennel, when he was in this city, and some time later on, actuated almost entirely by desire to aid in the Shipping Board wood-shipbuilding program, I gave up a splendid office practice to engage in the practical end of the business.

Beginning last June on raw forest land, and handicapped in securing equipment and lumber due to the great demand for equipments and to strikes in logging camps and lumber mills, the Anacortes Shipbuilding Co., under my management, had on December 1 developed a meeting wood-shipbuilding plant second to none in this country, with a capacity to launch 12 to 14 ships in one year. Transcript of Admiral Bowle's testimony before committee in reference to Anacortes yard states that two keels were laid and a few tools on hand. At that time there were four keels laid and two ships well along in frame, and a splendid organization completed; and the transcript further states that

a district officer recommended dismantling of plant and removing to Olympia. If this were done it would delay the shipbuilding program of the Sloan Shipyards Corporation in the completion of the Government ships for more than six months and entail a loss of more than $300,000. If the Shipping Board, through its subordinate officials, was actuated by an honest desire to aid the builders in building a first-class ship, subject to the requirements of the American Bureau of Shipping, they would cut out the innumerable changes and amendments and obstructions that had handicapped all of the builders who have had contracts for the Ferris standard type. While contracts have been let for wood ships by the Shipping Board for more than six months, only two ships, to my knowledge, have been launched, and these ships are built from the builders' own plans and are much easier to build than the standard type and in neither case have the ships been completed and ready for sea, as the contracts were for hulls only. It is my desire now, as it always has been, to give all the aid in my power to our Government in its war program, and because of the misleading statement made to our committee that has become public through the newspapers, placing me in a false position, I ask for an opportunity to appear before your committee.

JOHN A. SLOAN.

STATEMENT OF MR. ANDREW FURUSETH, PRESIDENT INTERNATIONAL SEAMEN'S UNION—Continued.

The CHAIRMAN. We will begin now where we left off. Mr. Furuseth, you may proceed with your statement.

Mr. FURUSETH. Mr. Chairman, I said that in so far as there was any serious question about men at all it arises only out of the failure to enforce the seamen's act as it was passed. There are two particular phases of that that the seamen watch and that the men on shore will watch. One is the forecastle question, but that is perhaps in the way of being cured.

Another question is the time of work—watch and watch. The law provides for watch and watch. Section 2 of the act provides:

SEC. 2. That in all merchant vessels of the United States of more than one hundred tons gross, excepting those navigating rivers, harbors, bays, or sounds exclusively, the sailors shall, while at sea, be divided into at least two, and the firemen oilers, and water tenders into at least three, watches, which shall be kept on duty successively for the performance of ordinary work incident to the sailing and management of the vessel.

I will read to you a letter from the Department of Commerce on that section:

I am in receipt of your letter of March 3, 1916, requesting the department's interpretation of the following clause appearing in section of the act of March 4, 1916, the seamen's act.

Then he quotes the law as I have just given it. Here is the construction:

In reply thereto I beg to advise you that the clause in question contemplates only equality in the length of time of the required watches, and does not prescribe that each shall consist of an equal number of persons. Its purpose is to insure equal watch hours to all employees, irrespective of how they may be divided as to number. In other words, if there are 10 sailors, they must be divided into at least two equal watches as to time, but not as to number; i. e., 7 may serve in one watch and 3 in the other. The same applies to the watches prescribed for the firemen, oilers, and water tenders. The division as to numbers is a matter to be determined by the officers of the vessel.

Of course that is plainly impossible; you can not have watches that way. By placing that construction upon it they have been able to continue the Kalashi watch for a certain part of the crew and the

regular watch and watch for a certain other part of the crew. The result of that, Senators, is that the men who come on board the vessel as young men to learn things are not learning anything at all. That is the condition on the Great Lakes almost altogether, and very largely the situation on the Atlantic coast. That works against getting the men, and that is one of the reasons why I say that the construction given to the law is such as to prevent the purpose of the law from being effectuated.

In section 13 of the seamen's act the Department of Commerce was given power to make additional rules and regulations. The result of that is that they have made the rules and regulations in such a way that they continue the same as before, and they are carrying the Chinese, Japanese, and South American negroes just the same as they did before. We have tried very hard to get it changed and could not do anything with it. Here is an illustration of the way Chinese are examined to determine their fitness; the answers are in pigeon English:

Question. What you do first—lower boat?
Answer. No sabe.
Question. Don't you take cover off first?
Answer. Ye, ye; cover.
Question. What you do next?
Answer. No sabe.
Question. Don't you put plug in?
Answer. Ye, ye; plug.
Question. Who go first in boat?
Answer. Sailor.
Question. Does not women go first?
Answer. Ye, ye; women.
Question. Who else go with the women?
Answer. Sailor.
Question. Does not children go next?
Answer. Ye, ye; children.

And he was passed as an able seaman under the rules issued. Those things have helped very materially to prevent native young men from going to sea. But aside from that, there has been more than 10 per cent increase on the Pacific and more than 5 per cent on the Atlantic. The number of men to whom able seamen's certificates have been issued is altogether about 44,000. Taking away the number on the Great Lakes, there should be about 33,000 who have received able seamen's certificates.

The CHAIRMAN. On both coasts?

Mr. FURUSETH. On both coasts, for the ocean and the coasts. And there is no question that the number of able seamen necessary can be found. There is no question about it at all. The difficulty with this thing is that they will not give the young men an opportunity to come in and learn. The ship owners on the Pacific will insist on having nothing but able seamen. The shipowners on the Atlantic will do the same thing. Instead of following the law, which requires 50 per cent able seamen this year, they have insisted upon having nothing but able seamen, and, of course, you can not get able seamen if you have not any ordinary seamen or boys. They do not grow in a cabbage garden. We can get them from foreign countries no more. The shipowners agreed last summer, on the Atlantic, at least, that they would do this thing; that they would carry ordinary seamen and boys. I read the agreement between the seamen and the shipowners,

countersigned by the Department of Labor, and the Shipping Board.

The CHAIRMAN. Before you pass from the seamen's act let me say this: You know it is claimed that that seamen's act stands in the way of getting the men; that is, it hampers the supplying of men for these ships; and one reason for that that is being urged is the requirement that they shall have experience and two years at sea.

Mr. FURUSETH. To begin with, the quotation is wrong; it should be three years at sea. The law provides for three years' experience, and they can get a certificate by virtue of their experience, or after 12 months' experience they can take an examination. The seamen's act does not prevent us from getting seamen; the seamen are here. And the seamen's act will give us the young men. If the seamen's act were to be taken away to-day, as is advocated, we would lose many of the men that are now going across the Atlantic, who are going not because of the money that is in it—they can go ashore and help build vessels and get $5 or $6 a day. These men are, a few of them, Americans, some of them are English, a great number of them are Scandinavians, and some of them are Hollanders. They are men in the best years of their lives. They are thorough seamen. They won't go with what they call "bums" or "slouches"; the push them aside. So they have picked out a particularly good class of men for that work.

Senator NELSON. Mr. Furuseth, according to your statement a man to become an able seaman must be three years at sea, or at least one year and pass an examination?

Mr. FURUSETH. Yes.

Senator NELSON. Then, if we applied that rule, how could we within the current year increase the number of our able seamen? How could we do it with that limitation?

Mr. FURUSETH. The fact is, Senator, we do not need to increase them; we have plenty of them. We have registered to-day 33,000. The number of going vessels of over 100 tons is 2,500, and that means an average of 13 men for each vessel.

Senator NELSON. Why do they not register?

Mr. FURUSETH. They have registered, as I have just said; there are so many certificates issued.

Senator NELSON. How many?

Mr. FURUSETH. Thirty-three thousand at least.

Senator NELSON. Will they provide enough men for our merchant fleet?

Mr. FURUSETH. That is enough; it is simply a question of getting them.

Senator NELSON. But it is not only a question of manning our own fleet, but of manning all other shipping that comes to our ports.

Mr. FURUSETH. Well, they come here with men. The vessel that comes here comes here carrying men, and they go away with men, and whatever they bring here balances what they take away. There are not over 2,500 seagoing vessels in the United States at the present time of 100 tons and upward——

Senator NELSON. Do you include the Lakes in that?

Mr. FURUSETH. No; I separate the Lakes from it; but I also separate more than enough men to man the ships on the Lakes, because there are 44,000 men registered as able seamen, and I take away

8,000 or 10,000 for the Lakes, which is really twice the number necessary. Now, if you say you have 33,000 men and 2,500 vessels, that comes to about 13 men for each vessel. As a matter of fact, the average number of men that the vessels carry is not over 7.

The CHAIRMAN. You mean able seamen?

Mr. FURUSETH. No; they all carry able seamen now. On the Pacific coast they have not any ordinary seamen at all; they do not carry any.

Senator NELSON. Why is that?

Mr. FURUSETH. I do not know. I personally think the reason for it is this: For years the shipowners have insisted that there was no necessity for any training for seamen, that you could make an able seaman in four weeks, or six weeks, and all that. Of course, they never meant that in the literal sense. Now, we have got to get down to real facts and acknowledge that it is necessary to carry so many able seamen, so many ordinary seamen, and so many boys. If they come down to the real facts of things and train seamen the way they have been trained all through the history of the world, the only way they can be trained, they must carry some boys and they must carry some ordinary seamen. Boys and ordinary seamen take up space and they take some food, and it does not altogether pay. It is much better from a commercial point of view to carry a fewer number of men and have them all able seamen, and so they have not brought in the number of boys and ordinary seamen that they should have brought in.

Senator NELSON. They must find an ample supply of able seamen, too.

Mr. FURUSETH. Why, we have an ample supply of able seamen.

Senator NELSON. I mean on the Pacific coast.

Mr. FURUSETH. Why, we have got over 5,000 able seamen there, and the ordinary employment there is about 4,000 to 5,000. That number can be diluted somewhat, as you might say. The law provides that 50 per cent shall be able seamen for this year. Put 33,000 skilled men in with 33,000 unskilled men and you have 66,000. Suppose you are going to launch 3,000,000; that would only mean 6,000 sailors, 3,000 able seamen.

Why, there are thousands of able seamen, thoroughly skilled men, scattered throughout this country in every direction, and these men can be got back to the sea. And the way to fail to get them back, the way to keep them away forever, is to interfere with the seamen's act or to let the Navy do the work. Then they will know that the calling of the seaman has gone by, and they will not bother any more.

Senator NELSON. I understood you to say at the last hearing that there was an agreement among the shipowners and sailors on the Atlantic coast with respect to this matter——

Mr. FURUSETH. Yes; I read that.

Senator NELSON. By which they were to have one-half ordinary seamen and apprentices?

Mr. FURUSETH. Yes.

Senator NELSON. The apprentices and ordinary seamen were to be equal to the able seamen?

Mr. FURUSETH. About that, yes. That is about what the arrangement was.

Senator NELSON. Was that agreed to?

Mr. FURUSETH. Yes; that was agreed to, and it was signed by the shipowners, by Franklin, by Munson, by Bull, and by Raymond, of the shipowners, and Stevens, of the Shipping Board, and countersigned and approved by W. B. Wilson and William C. Redfield. Now, the Shipping Board employs some additional men, as it was understood that they should, and they have manned their vessels as nearly as they could according to this arrangement. But the shipowners did not do it. They have not done it up to the present time.

Take it as it now stands, with the number of able seamen that we have got, with the number of able seamen that we can get if we go at it right, and the young fellows that can be taught in the training school up in Boston with six weeks' or two months' intensive training and say five or six weeks at sea—they can be taken away from there and put on board of merchant vessels going along the coast, and there is not one of the coasters but can take two men—and you will have all the seamen necessary to man not only the fleet that will be launched, but if you go at it hard enough you will have the seamen necessary for all the fleet that could possibly be launched, which is 6,000,000 tons. They figure it out 6,000,000 tons, and 6,000,000 tons would require 3,700 deck officers, 3,700 engineer officers, 1,050 steward officers, 12,000 sailors—that is, 6,000 able seamen and 6,000 ordinary seamen—22,000 firemen and coal passers, and 8,500 stewards and cooks. We know, if the experts are to be depended upon, that it will not be over 3,000,000 tons, but even at 6,000,000 tons the men can be found.

The CHAIRMAN. Do you favor this training school that you mentioned.

Mr. FURUSETH. Yes; in connection, however, with the agreement that we entered into.

The CHAIRMAN. Would that require any change in the seamen's act?

Mr. FURUSETH. Not at all.

The CHAIRMAN. The act provides for that?

Mr. FURUSETH. The act provides that in the first year there shall be 40 per cent able seamen, the next year 45 per cent, the third year 50 per cent. This is the third year. The fourth year, 55 per cent, and the fifth year 65 per cent, and after that 65 per cent. So that there would be two-thirds skilled men on board the vessels, and one-third would have to learn.

The CHAIRMAN. Is there a provision in the act for this intensified training to take the place of so many years' experience?

Mr. FURUSETH. No; but the Shipping Board has the authority to do that, and they are doing it now.

The CHAIRMAN. Can they qualify as able seamen?

Mr. FURUSETH. No; they can qualify as ordinary seamen, then go on board and be mixed with the real able seamen.

Senator JOHNSON. The agreement you have read here and to which you have just referred again is an agreement entered into by the shipowners on the Atlantic coast and on the Pacific coast?

Mr. FURUSETH. No; on the Atlantic coast.

Senator JOHNSON. Has the Pacific coast entered into it?

Mr. FURUSETH. The Pacific coast has agreed to it. They agreed to it just the same as the Atlantic coast, but they have not signed it.

Senator JOHNSON. And the shipowners on the Lakes?

Mr. FURUSETH. The shipowners on the lakes have absolutely refused to agree to it.

Senator JOHNSON. What is the effect of their refusal upon the agreement?

Mr. FURUSETH. The effect upon the agreement of their refusal, if they persist in their refusal or are permitted to persist, will be to destroy it.

The CHAIRMAN. Can you not enforce it, as far as these people who signed it are concerned?

Mr. FURUSETH. Well, you see the men are all over the country, in the interior of the country and around the lakes, and unless they know that this thing is a matter of good faith they are not going to answer this call which was adopted and which was going to be sent out when properly signed. Suppose I read this call. This was adopted by the meeting that grew out of a meeting of shipowners and the departments and seamen on August 1. A committee of 15 was appointed, 6 shipowners, 6 representing the seamen, and 1 from each of the departments, and this was drawn up there and signed by the chairman, Hon. George Uhler, Supervising Inspector General, Steamboat-Inspection Service, representing the Department of Commerce, and by the Secretary, Hon. A. Warner Parker, law officer of the Bureau of Immigration. [Reading.]

The United States Government, the shipowners, the seamen, jointly issue this call to the sea.

It is a call to men who have lived upon and love the sea, but left it, to return! It is a call to young men who have felt the lure of the sea, but resisted it, to come now!

The message to those who have left the sea is this: The conditions which caused you to leave no longer exist. Seamen are no longer bound by laws to the vessels on which they serve. The seamen's act has conferred this and many other blessings upon them. Economic and working conditions affecting the calling have been immeasurably improved. Attractive wages are being paid. The importance of the seaman as a factor in the life of the Nation is being recognized. The ancient and honorable profession of seamanship is again coming into its own.

The message to the young man, the novice, is this: You can now give ear to the call of the sea and respond to its lure with confidence that upon the sea a career is again a possibility. The improvement in the conditions affecting the seaman's calling has necessarily increased its opportunities for the ambitious and industrious to secure advancement. Conditions on board vessels have been materially improved. When vessels are in port the seamen are as free as men ashore. Opportunities for learning the duties of the traditionally honorable and important calling of seamen are now to be freely had. The spirit of adventure of the young man should readily respond to this opportunity.

The message to all followers or would-be followers of the sea is this: The United States of America, above all other countries, has proven itself the friend of the seaman. That Nation needs you now. Your "bit" in its service can be a very large factor in the advancement of its interests and in the defense of those principles for which it has always stood, at this particular juncture when history is being made—you can have a large and creditable share in the making of that history.

Many of those in our country have answered the call to become soldiers or to join the Navy. This is the third call of the country to join in the work on ships which are carrying the soldiers, the ammunition, and the necessary commerce of the world to all ports. Sailors are as necessary as soldiers. Congress exempted seamen from the draft act, because seamen are giving important military service.

Our country is building many steamers and it needs the men and the officers to man them as never before. The occupation of seaman affords excellent opportunities for seeing foreign lands and learning languages, as well as opportuni-

ties for aiding in the development of our commerce. Join the merchant marine now—serve your country—there is a great future before you on the sea.

An agreement has been reached between the shipowners and the seamen concerning conditions and wages calculated to assure adequate recompense and reasonable comfort to those who return to the sea or for the first time respond to its lure, and such agreement has been countersigned by the Secretary of Labor, the Secretary of Commerce, and the chairman of the Shipping Board of the United States Government.

Now, if that had been signed at that time by the shipowners, it would have promptly got the signatures of all the men, the representatives of the seamen. And if they had taken the young fellows on board as they came, you would have had no need of the training. They would have been trained in the natural and usual way. Eight months, or six months at least, having been permitted to pass away, I would say that the intensified training that is now being carried on in Boston is necessary. It may be necessary to enlarge that somewhat, I do not know, but as far as getting the men we need is concerned, assuming this thing to be signed and sent out in a regular way and lived up to, there is no more question about it than that I am sitting here.

The CHAIRMAN. Suppose the people on the Great Lakes persist in refusing to do it, what do you suggest ought to be done then?

Mr. FURUSETH. To begin with, all the vessels of 2,500 tons have been taken over by the Shipping Board, and they control them. The Shipping Board therefore can give orders to those vessels. As far as the other vessels are concerned, the vessels of less tonnage, if they are asked to do it they will do it all right. As far as the Lakes are concerned, Mr. Cowlby in my hearing told the Assistant Secretary of Labor and the Assistant Secretary of Commerce that they did not want anything to do with that matter, that they were doing their business and doing it all right. I am satisfied that they can be made to change their minds; there is power enough in the Shipping Board to cause them to change their minds.

Senator NELSON. You mean the carriers?

Mr. FURUSETH. Yes. And I think there is plenty of power, as it stands now, to convince Mr. Coulby that it would be better for him to agree and be honest about it. If there is no other way of doing it, I think an interview with Mr. Gary would do it.

Mr. Coulby says he does not want to do this thing because it would lead to the unionizing of his vessels. That is his only reason. I do not know whether it would lead to that or not; there is nothing certain about that. There is nothing in this that mentions union or nonunion. Of course the best skilled men, the only skilled seamen we have got, are members of the union, and if they are going to teach the others and live with them and teach them seamanship they might also teach them unionism. So in all probability it will lead to that, but even supposing that was the situation it would not be such a terrible calamity.

Senator VARDAMAN. It is not such a calamity to be a member of a union, is it?

Mr. FURUSETH. No. If the men do not want to be members of the union, they do not need to. There is nothing in this arrangement that compels them to be.

The CHAIRMAN. You believe, then, Mr. Furuseth, that there is no danger of any of our merchant fleet lying idle at the docks?

Mr. FURUSETH. I do not believe there is any danger of it at all.

Now, I would like to say a few words about this Navy proposition. To begin with, the Navy, when it mans vessels, uses three men to one; that is the usual manning scale. The *El Rio* and *El Dia* carried 64 men, all told, when they were running cargo between New York and Galveston. They are now in Navy management, and they have 301 men, including the gun crew. The tank steamer *Gargoyle* carried 35 men; now she has 125, including the gun crew, and the gun crew will be from 20 to 23.

Senator NELSON. Are not the men from the Navy trained gunners?

Mr. FURUSETH. I am going to come to that now. The Navy had 54,000 men when the war began. About one-third of those men, or a little less than one-third, had a service of one year or less. The Navy was 18,000 men short for its fighting ships when the war began. Now, whatever they got back of the skilled men who were in the fleet reserve they naturally would put back on the fighting ships.

Now, the Navy has expanded, so that according to the testimony given before some committee here the other day it has pretty nearly 300,000 men. That means this, that a whole lot of young fellows have come to naval-training stations on the Lakes and out in California and elsewhere where they are taught "Forward, march"; "Left, march"; "Salute"; and some calisthenics. In other words, they are getting, first, some of the training needed for a soldier, but you can not make a seaman that way. If you manned merchant vessels, vessels going across the Atlantic, with that kind of men, you would be doing something that nobody ever did successfully in the past.

Senator NELSON. But those men of the Navy are not put on merchant vessels because they are especially skilled in pure seamanship; they are put there because they are skilled gunners.

Mr. FURUSETH. Oh, of course; every vessel that goes across the Atlantic now that amounts to anything at all has a naval gun crew on board; that is, a gun crew. They have two or three guns and men to handle them. That is a separate thing altogether. That is, the gun crew. Those men would necessarily be used there; as long as you have the guns you will have to have them.

The CHAIRMAN. They have nothing to do with the navigating of the ship?

Mr. FURUSETH. They have nothing to do with the navigating of the ship. Of course there are in the Navy a large number of highly skilled seamen, but if you take them out of the fast cruisers and destroyers you have got to put untrained men in their places. So we say to you that to do this thing is, first, a waste of man power; it is a waste of man power three to one.

Secondly, it is a waste of tonnage. There must be some place for the men to live and sleep on board a vessel, and while you can arrange for five or six men additional without taking away any of the cargo space—you can do that in every vessel if you want to—when it comes to trebling the crew or doubling the crew that means you have got to take away some of the cargo space.

Senator JONES. What is the reason the Navy gives for using two or three times the number of men for this ordinary seamanship work that are used on a merchant ship ordinarily?

Mr. FURUSETH. I do not know. I know that the difference between the merchantman and the man-of-war's man is this: The merchantman is trained as an individual; he is trained to do work alone with a short crew. He is told to go and do so and so—"John, go and do this"; "John, go and do that." The Navy men work in groups. They are trained for fighting. Their main business is fighting.

Senator JONES. But when they are put on these merchant ships they are not put there for fighting?

Mr. FURUSETH. No; but they are trained for one thing, and they are to be used to do other things they are not trained for.

Senator NELSON. As I understand it, they are only put on those merchant ships that are armed.

Mr. FURUSETH. No; the idea is to put them on all merchant ships that go in the war zone; to man vessels entirely with them. That is the contention—that it has got to be done. If that is done, the result is inevitable that of the seamen that are now sailing not more than 15 per cent at the most will go into the Naval Reserve. They are perfectly willing to sail and take all chances as long as they are trusted; but if they are replaced by men whom they know to have less skill than themselves they will at once make up their minds that it is because they are not trusted, or for some other similar reason, and they can find something else to do. Besides, a great many of them, you know, are foreigners; that is to say, they are men of neutral nations. Of course, if there is any prospect of getting those neutral nations into this war, in that case I should utilize them as long as I could to train the native element, and then intern them when the war comes. But to drive them out now is to cut off your hands. The landsman that goes to sea has got to have somebody to teach him.

Senator NELSON. The Navy has its principal recruiting carried on in the interior?

Mr. FURUSETH. Yes.

Senator NELSON. Among the farmer boys. They are anxious to get them. They prefer them to recruits on the seashore. I have talked with naval officers, and they say that those farmer boys that they get from the interior and small towns make the very best men for the Navy, and they prefer them to picking up old sailors along the coast.

Mr. FURUSETH. Why, of course. That is true. But here is what Admiral Blue said: "The first year that they are in the Navy is a year for training only; it is the second year that they become valuable, and the third year they become very good men. There is the material there for as good seamen as the world has got. They are essentially, practically all of them, of the race from which the seamen have come throughout the world's history, and there is no reason why, with the proper training and the proper experience, they can not make as good seamen as the world ever had. But you have got to have some time to do it, and it has got to be done at sea. They must be get to sea as boys or as young men, and they must be set to work alongside of the able seamen."

Senator NELSON. But it takes you three years to make an able seaman, so you do not get them any faster than they do in the Navy. According to your statement, you do not train them any faster than they do in the Navy.

Mr. FURUSETH. No; you do not train them any faster than they do in the Navy; of course not. You train them differently; that is all. With the merchant seamen the vessel is his tool. It is what he needs. It is like the wagon is to a teamster. With the naval seaman the vessel is his weapon, and the training of the crew is different.

Now, Admiral Blue said: "I can take a merchant seaman and make a very good man-o'-war's man of him in three months, because he has got the sea habit." It takes some time for a man to get himself so accustomed to the sea that he can walk along the deck without holding himself fast to something when she is rolling and pitching. That is not done in a week or a month, or in six weeks, for that matter. You can do those things by getting back in the service the men that now are ashore, working in the building trades and elsewhere. Those men can be got to go back to the sea by getting them together with the men we have. Even assuming that you launch a thousand vessels, by carrying out the law you will have enough able seamen for this year. The next year there will be another situation. And then the men will be at sea all the time and learning something. They are not going to learn to be seamen ashore.

We had a meeting of the International Seamen's Union of America at Buffalo on the first Monday in December, and they instructed their officers to sign this general call to the sea as fast as it could be signed by the shipowners, and get it out. Then they adopted a separate one for themselves by a unanimous vote. Here is how that reads:

The Nation that proclaimed your freedom now needs your services. America is at war. Our troops are being transported over the seas. Munitions and supplies are being shipped in ever-increasing quantities to our Armies in Europe. The bases are the ports of America. The battlefields are in Europe. The sea intervenes. Over it the men of the sea must sail the supply ships. A great emergency fleet is now being built. Thousands of skilled seamen, seafaring men of all capacities who left the sea in years gone by as a protest against the serfdom from which no flag then offered relief, have now an opportunity to return to their former calling, sail as free men, and serve our country.

Your old shipmates—men who remained with the ship to win the new status for our craft—now call upon you to again stand by for duty. Your help is needed to prove that no enemy on the seas can stop the ships of the Nation whose seamen bear the responsibility of liberty.

America has the right, a far greater right than any other nation, to call upon the seamen of all the world for service. By responding to this call now you can demonstrate your practical appreciation of freedom won.

That is something we sent out ourselves. But we have not any ships to put them in. We can not go on board a ship and say to the captain, "Put this boy on the ship. Let me take him and teach him how to steer; let me take him to the forecastle and teach him the work there; let me take him in any part of the ship and teach him how to repair this or that." The average daily life of a seaman has got to be learned on a ship; it can not be learned in any other way. France tried this thing in the Napoleonic wars and suffered for it. Admiral Mahan in his book says that they could handle the ship better than any English seamen while she was in harbor; they could unrig her and rig her; but when she got to sea and had been to sea for three days she was a wreck. The English seamen, on the other hand, could take a ship that looked like a wreck and take her to sea and in a few days she would be all right. That is the difference between men who are trained for the sea and men who were trained for seamen's work on shore.

Senator HARDING. You do not think that would apply so intimately to the steamship, however, as it would to the sailing vessel, do you?

Mr. FURUSETH. It applies, Senator, just about the same. The motion of the vessel is the same. The sea has not changed. The form of the vessel has not changed. The rigging of the vessel has changed. You put a separate crowd of men on board the vessel to handle her machinery, but the seaman goes aloft just like he did before He does the kind of work that he did before, and the men who really know this think and write about it honestly and without any bias one way or the other, say that the skilled seaman can not be replaced. He is as necessary on the steamer, particularly in an hour of danger or trouble, as he ever was on board the sailing ship. The difference is just this, that the motive power used to be in the sails; now the motive power is in the screw. Going aloft in a sailing vessel, with all the ropes around and all the yards there, is much easier and simpler than going aloft on a steamer with very few ropes to get hold of; and you have got to go aloft once in a while. You have got to do the work, and you must be accustomed to the motion of the vessel and the motions of the sea.

Senator HARDING. Just for my own information, where does the man go aloft in a steamship, except in the crow's nest?

Mr. FURUSETH. Why, he goes much higher than the crow's nest. Not usually, but sometimes he has to. Suppose your wireless carries away; who is going to fix it? A man has got to go aloft there somehow or other and get the wireless right again. He has got to climb.

The CHAIRMAN. I think the suggestion that perhaps we would have to have naval reserves on these vessels arose from the fact that it was apprehended that we would not have enough men otherwise.

Mr. FURUSETH. It may be. There was another reason put forward, that there was not enough discipline among the merchant seamen. Why, a man that has read the law governing the sea certainly ought to know better than to make that kind of statement. All they do with a man in the Navy is to send him to jail for disobedience of orders. They do the same thing with the merchant seaman; and in the Navy they can shoot him under certain conditions, and they can do that in the merchant service in the war zone. A man came across the Atlantic the other day who thought he was a passenger; he had been an officer. He was told to go and do certain things, and he refused. He was given, I think, a year or four or five years as a penalty.

Senator MARTIN. Take the volunteer and enlisted crew. They go abroad on a merchant vessel and stop at a foreign port. Suppose they do not want to sail back home; there is no way to make them do it.

Mr. FURUSETH. A seaman never could leave a vessel over in the war zone at the present time.

Senator MARTIN. He does not, but he can if he chooses?

Mr. FURUSETH. Oh, he can not, either.

Senator MARTIN. There is no law by which he can be forced to do it. But if he belongs to the Navy they can shoot him.

Mr. FURUSETH. You say if he belongs to the merchant service he can go ashore? Why, no, Senator. The law provides that a man

can not go ashore unless he has permission. All an officer has to do in that case is to put a man at the gangway and see that nobody goes ashore.

Senator MARTIN. But suppose he gets ashore?

Mr. FURUSETH. Well, to begin with, he can not get ashore. But if one or two get ashore and stay away, the people ashore in France will have them in mighty short order and put them back anyway. It is war over there.

Senator MARTIN. But the right of it, the power? As I understand it, there is no power. There is no power that can compel them to sail. If they refuse to go aboard the ship, nobody can make them go aboard the ship.

Mr. FURUSETH. That would apply, Senator, in a port here in the United States. If a man does not want to go aboard any vessel in New York Harbor or any harbor in the United States, there is no power in anybody to put him aboard against his will, but when he gets over to Europe he is in the war zone and there won't be any question about power. They have got all the power; all the rest of the law is suspended there.

Senator MARTIN. It may not be necessary to enforce that authority, but if there should be necessity it can not be enforced, as I understand it. And that is the reason they want them in the Naval Reserves, because then they are subject to orders.

Mr. FURUSETH. The same identical thing would happen to a merchant seaman if he refused obedience to orders in the war zone. It would not make any difference.

Senator MARTIN. You think the captain of a merchant ship has the right to shoot a sailor if he refuses to leave France?

Mr. FURUSETH. Now, hold on. The captain of a merchant vessel out at sea in case a man refuses to obey orders has just the right to put him in irons and he has the right to keep him in irons on bread and water. And in case of a mutiny he has the same right to shoot that the captain of a man-of-war has.

Senator MARTIN. But suppose a man goes ashore in Liverpool——

Mr. FURUSETH. When he is in Liverpool the law provides that he can not go ashore except by the permission of the master of the vessel.

Senator MARTIN. But he has to go ashore in the discharge of his duties.

Mr. FURUSETH. No; he has not.

Senator MARTIN. I suppose, then, you do not unload your ship at all?

Mr. FURUSETH. They unload them with longshoremen; they lie there waiting until the longshoremen can unload them.

Senator MARTIN. I suppose, then, a seaman should be held as a prisoner in a foreign port.

Mr. FURUSETH. No. Under war conditions he will be held whether we have any law for it or not. Outside of war conditions he ought never to be so held. And that is just the reason why the American quit the sea—because he was treated as a serf or slave.

Senator MARTIN. I do not know of any additional power given to a sea captain by war conditions when he is at Liverpool or Southhampton.

Mr. FURUSETH. I do not know whether he has any additional power or not theoretically, but I know he has got the power prac-

tically, because men that are leaving New York sign and agree that they are not going to go ashore on the other side except by special permission, and they are not going ashore.

Senator MARTIN. I have understood—I am not familiar with the subject—that the object in having the Naval Reserve in charge was that they were subject to military law.

Mr. FURUSETH. One of the things, I think, that caused them to urge it was this: A crew has made a trip over to France or over to England. They come back and they go ashore. They get another crew and they go out again. They would rather have the same crew right along, I presume. That is one of the reasons for it. A great deal of difficulty has arisen out of misunderstandings. For example, the Quartermaster's Department told me that they were going to pay commercial wages to the men on board the vessels that were sailing for the Army, for the Quartermaster's Department. I notified the seamen all over the country that the Quartermaster's Department in the future would pay the commercial wages. It turned out they did not, and, of course, there was a great deal of dissatisfaction. Now, they have again issued instructions that it shall be done and the dissatisfaction has passed away.

Now, these men that are sailing, as I said, are mostly of neutral nations. They have certain reasons why they are sailing. It is partly to prove to the world that a free seaman can do as well as anybody else; partly that they want to show their gratitude; partly, at least, sport, adventure. That is what makes them sail. But the moment they feel themselves discriminated against—the less skilled are taken in their places—of course they are going to quit sailing. You could not get those men into the Navy; they will not go into the Navy.

The CHAIRMAN. What do you know about the offer of the Navy to recruit and train men for the ships?

Mr. FURUSETH. I know but very little about it. I only know about that what I have learned from the newspapers and some little thing that was said by Mr. Howard in Boston, who is in charge of this training for the Shipping Board. I think he knows all about it. He can state that better than I can; I can not get it at all.

The CHAIRMAN. You hold that is not necessary? That we can have the men in the ordinary way?

Mr. FURUSETH. Yes; the Navy proposition is a waste of man power, a waste of tonnage, a waste of skill, and consequently unsafe during the war.

Now, let us go a little further with it. The men who have joined the Navy have joined the Navy for the period of the war. When the war is over they are going to go back to their callings. A great many of them are college men. They are going to leave. Then you will have ships and no seamen. The United States Government could not very well import Chinese and put them on Government ships. The shipowners may take the vessels over and do that, but there will not be enough for that even under the circumstances. It will result in vessels passing away.

But there is one thing that should never be forgotten. There is not an instance in history, so far as I have been able to discover it—and I have dug through it as far as it was possible—there is not an

instance in which a nation which did not furnish its own seamen was able for any length of time to keep any reasonable share of the world's commerce or any share in the sea power of the world. The tools went with the men.

Senator MARTIN. The United States is able now to furnish seamen?

Mr. FURUSETH. The United States now can furnish them. Using this system you can gradually and within a reasonable space of time get all native seamen, and once having them you will keep them.

Senator MARTIN. You say we should be looking forward now to securing seamen for 6,000,000 tons of shipping?

Mr. FURUSETH. Six million tons of shipping will need 3,700 deck officers, 3,700 engineer officers, 1,050 steward officers, 12,000 sailors, 22,000 firemen and coal passers, and 8,500 stewards and cooks. That is what 6,000,000 tons of shipping will need.

Senator MARTIN. What is necessary to add to existing law?

Mr. FURUSETH. There is no need of any change in existing law. Carry out the existing law for one thing. Secondly, get the shipowners to carry out existing law and to work in cooperation with the law.

Senator MARTIN. Your point then is that we must secure the enforcement of existing law, that something ought to be done for the enforcement of existing law in order to get the officers and men to man 6,000,000 tons of shipping?

Mr. FURUSETH. That is it.

Senator HARDING. Are they not enforcing the law on the Lakes, Mr. Furuseth?

Mr. FURUSETH. No. There are supposed to be 10 sailors on board one of those ships, 2 wheelsmen, 2 watchmen, and in some instances a boatswain and 5 deck hands. Those deck hands are on deck in the daytime and sleep at night. They are never permitted to go to the wheel, never permitted to go on the lookout. They do no seamen's work at all, except scrubbing and painting, so that they could be there for years and never be seamen. They do not learn anything that a seaman necessarily must know.

Senator MARTIN. Could you make a roll of these men necessary to man this 6,000,000 tons of shipping? Could you locate them and name them?

Mr. FURUSETH. I could not name and place them.

Senator MARTIN. What I was leading up to was whether or not it would be expedient to draft them into the service necessary for the war. Understand me, I am not saying it ought to be done. I am asking what you think of it.

Mr. FURUSETH. The worst thing you could do.

Senator MARTIN. As I understand it, you are not asking for any new legislation?

Mr. FURUSETH. No new legislation at all.

Senator MARTIN. You are expressing the opinion that we can get all the officers and men for our fleet, up to 6,000,000, to be built in 1918 if the existing laws are carried out?

Mr. FURUSETH. If they are carried out honestly and in good faith, yes. That is my own opinion, based upon the best information that can be obtained at all.

Senator HARDING. May I submit a paragraph or two from a recent report of an officer on this matter and get your opinion?

Speaking of a trip to Europe, I quote:

On one occasion it was necessary to partially lower the lifeboats while in the war zone and hold abandon-ship drill, as required by law and also by the Bureau of War-Risk Insurance. It so happened that the vessel entered the war zone on Sunday, and although the vessel was holding abandon-ship drill for the safety of the passengers and crew, it was necessary to pay the crew while standing for this drill 40 cents an hour overtime.

Mr. FURUSETH. Is that supposed to be from a naval officer?

Senator HARDING. It is an official report, I understand.

Mr. FURUSETH. There is something curious about that.

Senator HARDING. Is that union rule, Mr. Furuseth?

Mr. FURUSETH. No. The union rule is 40 cents extra for ship work, 50 cents extra for cargo work, when it is done outside of the regular hours in port.

Senator HARDING. Let me submit another paragraph:

The first hour of the watch the speed of the ship is reduced from one-half to a full knot an hour. This is very dangerous in the war zone, speed being the main factor of safety. The reason for the reduction of speed is explained as follows: If any members of the engineer's force decide that they do not care to go on watch they can not be made to do so. The only recourse in this case is for the engineer officer to send a representative among other watches to get volunteers to take the place of the men who do not care to go on watch. The pay of the men who do not go on watch is then checked, and the men who take their watches are paid from such funds as they check against the former. As the watch is always relieved at the meal hour after volunteers have been secured they then go below and get their meal, and this usually takes them about an hour. As a result, they get pay for a four-hour watch while they are actually standing but a three-hour watch, the first hour of the watch being short of men. To the best of my knowledge, this happened with every watch on the particular ship in question from New York to Liverpool and on the return trip. I saw as many as eight names reported by the captain of the ship in one watch for this reason.

Mr. FURUSETH. That is one of the International Mercantile Marine vessels. I recognize that situation; the report comes from one of the Mercantile Marine vessels; I know the kind of crews that they are getting. They would be getting better men if the forecastles were decent. There is no question about it that there are some shirkers among them; there is no necessity for them to carry those men if they do not want to. They have the penalty provided by the law for a case where a man refuses to go on watch; the penalty is imprisonment when that man comes ashore.

Now, with reference to the men taking all the watch to get through their meals, that is not done on any properly regulated ship. And they can stop that thing any time they want to do so.

I should say that the man who wrote that and complained about that situation either does not know what powers he has under the existing law, or else he longs very much for the old conditions, when the belaying pin and the capstan bar made the men work.

The CHAIRMAN. Why do you suppose that they take men like that? Why do they not get a better grade of men?

Mr. FURUSETH. Well, it is a very strange proposition; but it is a case of bad quarters especially; they have continued to carry Spaniards or South Americans all this time; men who could not understand the language; they have carried them and continued to carry them in spite of the law.

As far as some of the men—those in the American line, as we call them—are concerned, they are usually Liverpool men; a great many of the men sailing in those vessels are Liverpool men.

Why they persist in carrying those foreigners is more than I can tell. They do not need to; they have had trouble with them. They carried liquor on board, and the agent of the union said to Mr. Franklin, "Why don't you stop that?" Mr. Franklin said, "How can I stop it?" The agent of the union replied, "Why, you have got the power to stop it; examine their clothes when they go on board and take the liquor away from them." So that was done, and that ended the trouble there.

Those are men who were leading the hardest possible kind of life that you can think of. As we say at sea, they were "kicked from h—— to hackney" by everybody. And as a result if they get a little freedom they are liable to abuse it. But it is easy enough to deal with that question if the shipowners really want to do so.

Senator HARDING. It is fair to say to you that one of the most grievous complaints in this report is concerning the drunkenness of the seamen who are taken aboard; and you have just touched on that. May I quote just one more paragraph from this letter?

Mr. FURUSETH. Certainly.

Senator HARDING (reading):

On one occasion when it was necessary to remove the passengers from the vessel one of the crew of a boat transferring the passengers, on coming alongside of the relief vessel, jumped out of the vessel and went aboard the relief vessel, refusing to return to his ship in order to bring off the remaining passengers. This man was declared a deserter. However, the seamen's union took up the case with the steamship company, and the decision that the man was a deserter was overruled. Of all the men in the forecastle on this particular ship there were only three, in my judgment, who had any knowledge at all of the seagoing profession. These three were naturalized Americans who had been in this country for a period of from 5 to 12 years, and they were intoxicated about 30 per cent of the time.

Mr. FURUSETH. Well, now, to begin with, I can not understand that kind of a report. To begin with, those seamen have no business to carry liquor on board; it depends upon the officers of the vessel whether it is stopped or not; they ought not to permit it. If they permit them to buy liquor, some of the seamen will buy it and get drunk—and so will the man-of-war's man.

Senator HARDING. Has the union ever touched on the question of the use of liquor at sea?

Mr. FURUSETH. Why, of course. At sea? At sea, we have done everything we can to abolish it. We have told the shipowners, "For God's sake, get your stewards to stop that selling of liquor." We have told them that it causes all kinds of trouble. And on the Pacific coast and some other places we have managed to get it almost entirely done away with.

But, you see, there is the same old story; somebody makes money out of it, and so they keep on doing it.

As far as the statement that those men were not seamen is concerned, that seems to be out of the question. There is not any truth in that statement, because they could not be in those vessels unless they were seamen. Those vessels carry about 24 able seamen each; and to say that only 3 of them were real able seamen is preposterous. All of those men have able seamen's certificates. If they were not

able seamen, what can you say about the inspectors who gave them their certificates as able seamen?

Senator JOHNSON. You replied to the last of the paragraph that Senator Harding just read, concerning the use of liquor on board ship. But you did not reply to the first part of that paragraph relating to some seamen refusing to man the boats properly.

Mr. FURUSETH. I can not understand that. Was that in the Mersey? There are only two places where there can be a relief boat—either in Ireland or in the Mersey; that is, the passengers going ashore in the relief boat while the vessel is at anchor in the Mersey or at Queenstown; a boat comes alongside and takes the passengers ashore; and there are not any of the men on board of the vessel in that case who go in that boat taking the passengers ashore.

Senator HARDING. Well, this was in a case where there had been an accident.

Mr. FURUSETH. Well, if the men left the vessel and refused to come back to the vessel, that was desertion, and all they had to do was to put those men down as deserters and take away their wages.

Senator HARDING. Well, the writer of this says that that was done, and the union interceded and persuaded them to have the charge of desertion withdrawn.

Mr. FURUSETH. Maybe for some reason or another they did that. I would not have done that; it is not according to the rule.

Senator HARDING. Apropos of what you are saying now, I am only giving you these extracts in order to get a little light on the subject.

Mr. FURUSETH. Certainly.

Senator HARDING. You say that it is impossible for a man to go aboard ship without being qualified?

Mr. FURUSETH. No; I do not say it is impossible. If the inspectors issue an able seamen's certificate to a landsman, we can not stop them. But they are not supposed to be aboard ship as able seamen without being able seamen having 36 months' experience.

Senator HARDING. Well, does the union issue a certificate to them as able seamen?

Mr. FURUSETH. Oh, no; the inspectors do that; the United States inspectors of hulls and boilers.

Senator HARDING. May I read one more extract, for our general illumination? As to the ability of the personnel secured for the deck force, the following incident is cited:

A representative of the seamen's union showed up just before sailing with a man whom he represented to be an able-bodied seaman. The man was hired as such, the vessel being required to take their certificate as an evidence of their ability.

Mr. FURUSETH. Whose certificate?

Senator HARDING. I do not know. I will read further:

As far as I can learn, there are no qualifications required to get a seamen's certificate. This same man was afterwards on watch while I was on guard as an Army officer on the bridge. The captain of the ship called this man on the bridge and told him to secure a signal halliard; the man did not know what he meant by a signal halliard; but after being shown one, took the free end of the halliard, wrapped it twice around the pin rail and walked away. The captain called him back and asked him if that was the way to secure a line, and he said, "Yes"; whereupon the captain asked him how long he had been going to sea, and the man stated that it was his first trip.

Mr. FURUSETH. Well, now let me read you something, Senator. from the seamen's act:

That no vessel of one hundred tons gross or upward, except as provided in section one of this act, shall be permitted to depart from any port of the United States, unless she shall have on board a crew not less than seventy-five per centum of which, in each department thereof, are able to understand any order given by the officers of the vessel, or unless forty per centum in the first year, forty-five per centum in the second year, fifty per centum in the third year, fifty-five per centum in the fourth year after the passage of this act, and thereafter sixty-five per centum of the deck crew, exclusive of licensed officers and apprentices, are of the rating of not less than able seaman. Every person shall be rated as an able seaman and qualified for service as such on the seas who is nineteen years of age and upward and has had at least three years' service on deck at sea or on the Great Lakes on a vessel or vessels to which this section applies, including decked fishing vessels, naval vessels, or Coast-Guard vessels; and every person shall be rated an able seaman and qualified to serve as such on the Great Lakes and on the smaller lakes, bays, or sounds who is nineteen years of age or upward and has had at least eighteen months' service on deck at sea or on the Great Lakes or on the smaller lakes, bays, or sounds on a vessel or vessels to which this section applies.

Now, how does a man get that certificate as an able seaman? He goes and makes an affidavit specifying the vessels he has been in and stating the time served on each. It is provided in the act that he shall state the time he began on such vessel and the time he left her and shall state the name and the nationality of each vessel, so that you can investigate and find out whether he made a false affidavit or not; and if you find when you look it up that he is not what he claims to be, you can have him imprisoned under the act for false swearing. The law specifically provides a penalty for that; but we can not enforce the law.

Senator HARDING. Let me ask you this question: Has the assumption of the control of shipping by the Shipping Board tended to a fuller and more complete enforcement of the law?

Mr. FURUSETH. So far as the vessels that they themselves control are concerned, yes. I mean, where they control, where they hire the crew and man the vessel, yes. They will man the vessel so as to give the proper number of able seamen, and the proper number of men being there to learn to be able seamen, because they realize the necessity of having men to learn.

Senator HARDING. Well, where does the loose enforcement of the law manifest itself?

Mr. FURUSETH. I should say, first and foremost, in the Department of Commerce.

I have read here their statement on watch and watch. Why, you can take these regulations that they have issued, circular No. 265, and you will find that under them anybody will be able to pass as an able seaman, at least, as far as the language is concerned.

Senator JONES. When did that nonenforcement of the law begin?

Mr. FURUSETH. With the beginning of the law.

Senator JONES. It never has been enforced?

Mr. FURUSETH. Never has been enforced. We tried to get it enforced in Seattle; we tried to get it in San Francisco; we tried to get it in New York, in Baltimore, and in Philadelphia, and then we dropped it.

Senator JONES. What excuse was given for the nonenforcement of the act?

Mr. FURUSETH. Well, that was following the instructions given in this circular [indicating].

Senator JONES. Yes; but that circular was issued by the department.

Mr. FURUSETH. Yes.

Senator JONES. What excuse does the department give for waiving the various provisions of the law?

Mr. FURUSETH. They say that this circular is according to the law. I have been pleading with them and telling them that it is not; I have been showing them why it is not. Senator La Follette wrote to them, calling their attention to it; and nothing has been done.

Senator JONES. Did not the department, soon after the law was passed, give out a statement to the effect that if they enforced the law very few ships would be able to sail?

Mr. FURUSETH. I saw that stated in the newspapers; I do not believe it.

Senator JONES. My recollection is that I received a statement of that kind from the Department of Commerce and put it in the Congressional Record.

Mr. FURUSETH. As far as I am concerned, I do not believe that that is true.

Senator JONES. But was that really not the attitude of the department?

Mr. FURUSETH. Yes; and I guess that was the reason. [Reading:]

The department construes the language "able to understand any order given by the officers of such vessel" to mean the necessary orders that may be given to the members of the crew in each department in the course of the performance of their duties. The department does not construe the above section as requiring the use of any particular language—

So far that is all right—

on the part of the officers or crew of any vessel. Any language which is understood in sufficient measure by the officers and the crew will comply with the provision of the law.

That is all right.

It must be clearly understood, therefore, that the section must not be construed as requiring an English-speaking crew for an American vessel.

That is all right, too.

For example, on a French vessel the French language is understood by the officers, and if understood by a proper proportion of the crew would suffice.

Of course that is true; that is the meaning of the law.

The same is true of Spanish on a Spanish vessel or German on a German vessel. There is no specific language that is required, but only that whatever language is used shall be understood as the law requires.

If that was carried out properly, there would be no difficulty.

The department also construes the section as meaning only such orders as may be normally given to the members of the crew in each department of the vessel in the course of the usual performance of their regular duties.

Why, the usual conditions and the usual duties—my grandmother can do it then. It is when there is any trouble that you need men that understand and men that can do things. And it is absurd to think that you can think of all the possible orders given to a man aboard of a vessel. They are so innumerable that there is no way of

being able to understand those orders, except by being trained in the work and knowing the language.

The CHAIRMAN. Are there any further inquires that the members of the committee desire to make of Mr. Furuseth? Have you any further statement to make, Mr. Furuseth?

Mr. FURUSETH. So far as I am concerned, Mr. Chairman, if the members of the committee have no further questions I am through.

I want to say, however, that here [indicating] is the Forty-first Annual Report of the President, Treasurer, and Attorney of the Legal Aid Society of New York. The officers of that institution are such men as Woodrow Wilson, William H. Taft, Theodore Roosevelt, Charles E. Hughes, Carl Schurz, and Arthur von Briesen. The men who are actually doing the work for that society are very reputable attorneys, and here is what they say with reference to the seamen's act——

Senator NELSON (interposing). Has that been printed in the record?

Mr. FURUSETH. No. Here is what they say on the effect of the seamen's act:

Never before has the seamen's branch been called upon to assist in having construed so many new questions of law, owing to the changes in our old statutes, due to the new seamen's bill. The effect of the seamen's bill as enforced, particularly as to the provisions relating to advance notes or advance wages, and the right of seamen to collect half their wages in American ports, as applicable to American and foreign vessels, is by far the greatest and most important of anything that has transpired in the shipping world for a long time. The Legal Aid Society took action in favor of abolishing the advance note or of making a law abolishing the payment of wages in advance of the time earned; this action was taken when the bill was pending before the committee on merchant marine and fisheries in Congress. Our activities were in line with the provision of the seamen's bill, abolishing involuntary servitude and removing the remedies given to foreign Governments and foreign shipowners to arrest seamen who desert in ports of the United States. Seamen, being given a right on American and foreign vessels alike, to demand one-half wages or half the wages earned by them and unpaid, in American ports, have been able to enforce that right by the provision of the law which enables them to bring suit for the full amount of wages owing them, in case the master refuses to pay them half. I am inclined to believe the theory and actual operation of the seamen's bill is bound in time to prove its soundness and efficiency.

I am informed that seamen coming here on foreign vessels which are sent to American ports to compete in American trade leave their vessels unless the master voluntarily guarantees them an increase in wages which will bring their average earnings up to a par with the average earnings of American seamen and other seamen in American ports which have already arrived at the American standard. As a rule, seamen on foreign ships demand one-half their wages and then quit. The result is the foreign ship's master must refurnish his vessel with a crew before leaving. To do this he must apply to shipping masters or one of the seamen's institutions who supply seamen, but he has to pay the going rate of wages in the port of New York or Norfolk or whatever port he happens to be in.

The seamen then take the precaution to see that there is incorporated in their contracts of hiring a provision that they shall be paid off in ports of the United States only. This assures them that they will always be discharged in a port paying wages as high as the ones in the United States or that they shall be returned by such foreign owners to ports of the United States, where they will again have an opportunity of securing the best rate of wage. One need not be a mathematician or a student of economy to conclude that the enforcement of this legislation means the creation of an opportunity to the American shipowner to compete with foreigners on a par, so far as labor cost is concerned; and, secondly, gives America an opportunity to build up a merchant marine by reason of the fact that higher wages are paid on board all vessels, and rules for safety appliances, better food, larger crews' quarters, and general conditions on board are enforced on American vessels—

As well as on others. Now, of course, I have been testifying before the committee purely as to the matter of seamen—sailors and firemen. You have Capt. Westcott here; he knows all about the questions relating to officers on board ships. That is a matter that I have not been dealing with, and I am not able to speak with any kind of real information about that, but Capt. Westcott can do so.

The CHAIRMAN. We are very much obliged to you, Mr. Furuseth.

Senator JONES. Mr. Chairman, I would like to have called to testify before the committee some person from the Shipping Board who can tell us about how they let contracts for equipment and supplies for ships, such as the construction of lifeboats and things of that kind. I understand that bids have been called for for lifeboats and other equipment to supply all these various ships; and I should like to have some one from the Shipping Board or the Fleet Corporation come before the committee who can give the committee information as to the bids that were called for, the time they allowed for delivery, and other facts relating to such equipment. I do not know just who would be the proper person to give the committee that information, but I should like to have him called, whoever he may be.

The CHAIRMAN. All right; I will find out who is the proper person to give that information, and request him to appear before the committee.

(Thereupon at 3.40 p. m. the committee proceeded to the consideration of executive business, and at 5.30 p. m. adjourned to meet at 10 o'clock a. m., Tuesday, January 15, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

TUESDAY, JANUARY 15, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 o'clock a. m., in the committee room, Capitol, Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, and Harding.

The CHAIRMAN. It appears that Mr. William Denman, who was to appear before the committee this morning, is indisposed, and will not be able to appear to-day, and, in the absence of objection, the committee will adjourn until 2 o'clock to-morrow.

(Thereupon the committee adjourned to meet at 2 o'clock p. m., Wednesday, January 16, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

WEDNESDAY, JANUARY 16, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., in the committee room, Capitol, Senator Knute Nelson presiding.

Present: Senators Nelson (acting chairman), Sherman, Harding, Fernald, Calder, and Johnson.

Senator NELSON. Senator Fletcher, the chairman of the committee, is attending the funeral of Senator Brady, and he has asked me to act for him and proceed with the hearing until he arrives.

Senator Fernald, you have some gentlemen from Maine whom you wish to present, have you?

Senator FERNALD. Yes, Mr. Chairman; I would like to have the committee hear these gentlemen from Maine, who have been in the shipbuilding business for a very long time.

Mr. Sawyer, will you proceed to make your statement to the committee?

Senator NELSON. You may take charge of examining these gentlemen, Senator Fernald.

STATEMENT OF MR. HARRY B. SAWYER, SHIPBUILDER, BATH, ME.

Senator FERNALD. Will you give your full name, Mr. Sawyer.

Mr. SAWYER. Harry B. Sawyer.

Senator FERNALD. And your residence?

Mr. SAWYER. Bath, Me.

Senator FERNALD. You are in the shipbuilding business, are you?

Mr. SAWYER. I am.

Senator FERNALD. What company do you represent?

Mr. SAWYER. The Kelly-Spear Co.

Senator FERNALD. How long have you been in the shipbuilding business?

Mr. SAWYER. Personally, myself, I have only been in it 15 years. My company belonged to my father; and the company has been in existence 31 years, and in operation all the time. And this company succeeded the Goss & Sawyer Co., which was established by my father 20 years before that, so that my company represents 51 years of experience.

Senator FERNALD. Your father was a shipbuilder before you?

Mr. SAWYER. Oh, yes; he was a shipbuilder before me.

Senator FERNALD. What class of ships have you been building—wooden or steel?

Mr. SAWYER. Wooden, entirely.

Senator FERNALD. You have some contracts now for the Government, have you not?

Mr. SAWYER. We have one for the Government; yes, sir.

Senator FERNALD. How long have you been building that? How long since you received that contract?

Mr. SAWYER. We received the contract about the middle of August.

Senator FERNALD. And when is it to be completed?

Mr. SAWYER. The first of June.

Senator FERNALD. The first of the coming June? Do you expect to have that out on time?

Mr. SAWYER. I hope to.

Senator FERNALD. Now, in your own language and your own way, Mr. Sawyer, the committee would like to have you tell us just the condition of the shipbuilding business in Maine, and whether we have the lumber and the men and the conditions favorable there for the building of ships. If you will give us a little history of that I think it would be well.

Mr. SAWYER. As I said, I represent an old company. My organization consists almost entirely of the foremen that were reared by my father. They are men from 50 to 70 years old—the foremen. They learned the business a good many years ago and have been in the business forty-odd years. We have been engaged almost constantly in getting out the northern timber. This is the first strictly yellow-pine ship that we have run up against, simply because we could get our timbers up there in Maine.

You hear a good deal said about our large timbers. It is not that our timbers are larger than the southern pine; our timbers are larger than theirs, but the most important thing is that our large timbers grow crooked, and that helps us in getting out these timbers for the Government ships that the southern-pine people have trouble about. If there is a perfectly straight piece of large timber it has got to have a crook put in it so that you can use it with the smaller timbers.

And I think that we can handle a limited number of vessels up there if they will allow us to use the Maine timber in its construction.

Senator FERNALD. In comparison with the southern pine, how do our woods compare as to strength, etc.?

Mr. SAWYER. Our timbers would be stronger for the simple reason that we would get the natural crook in our turns. I do not think there would be much difference if you forced them both out of crooked timber. In taking the crooked timber, of course, the grain follows the ground and makes it stronger.

Senator FERNALD. How about the prices of the timber, as between the southern woods and yours?

Mr. SAWYER. I do not think there would be much difference now. Of course, their prices have all gone up, as well as ours and all the rest of them.

Senator NELSON. What material have you used heretofore?

Mr. SAWYER. We used oak and yellow brich and rock maple below water; the two last-named woods will last as long as any, so long as

you can keep them under water. And we can go down to Nova Scotia and get the black spruce from there. We have used that.

Senator NELSON. How about the outside planking?

Mr. SAWYER. We have to use the yellow pine for that, or the Douglas fir from the Pacific coast.

Senator NELSON. You have used that heretofore?

Mr. SAWYER. Oh, yes; we used that constantly. But in a great many of these ships, where the builders are having trouble, it is to get out these flitches. That is what has bothered the shipbuilders; it is not the long, straight timber that has bothered them, but these extremely wide flitches; and if that timber had any crook at all, you can see how it would help out the situation.

Senator NELSON. We used to call those "elbows"; we used those for our sleds out West when I was a boy.

Mr. SAWYER. Yes; it would be the same thing.

Senator NELSON. They would have the natural elbow, instead of one that required steaming and bending?

Mr. SAWYER. Yes.

Senator FERNALD. They would be much stronger. Now, how about the labor conditions there. Are you prepared to handle contracts?

Mr. SAWYER. A limited number. We personally are not prepared to take on a large amount of work.

Senator FERNALD. No; but the builders in Maine in general?

Mr. SAWYER. The labor conditions are good in Maine, as compared with some of the other sections of the country; we have not had so much of the shifting population.

Senator NELSON. You have a permanent class of shipbuilders in Maine, have you?

Mr. SAWYER. That is the idea. And most of our men have lived there all their lives.

Senator JOHNSON. Mr. Sawyer, your contract, you say, was made on the 1st of August?

Mr. SAWYER. The contract came back to us about the middle of August.

Senator JOHNSON. And it was for how many ships?

Mr. SAWYER. Just one.

Senator JOHNSON. How many ways have you?

Mr. SAWYER. We have three in actual operation. We could have eight ways in there; we have quite a large plant.

Senator JOHNSON. How many could you build if running to your full capacity?

Mr. SAWYER. We could build seven or eight, if running to our full capacity.

Senator JOHNSON. Seven or eight at one time?

Mr. SAWYER. Yes, sir.

Senator JOHNSON. Have you made any suggestion to the Shipping Board, or any application to them, as to any further contracts?

Mr. SAWYER. I have asked them to give me one or two more.

Senator JOHNSON. With what result?

Mr. SAWYER. They said they would let me know to-day. I am anxious to keep my organization going; that is all. I was filled up with private work when this thing was first conceived.

Senator JOHNSON. And you have sufficient organization so that you could build six or seven, you say?

Mr. SAWYER. I have not sufficient organization; I have not sufficient men.

Senator JOHNSON. Could you get them?

Mr. SAWYER. I do not know whether I can.

Senator JOHNSON. You have sufficient organization now to do how much work?

Mr. SAWYER. Well, we could take care of two more, if necessary; three is what we ought to carry.

Senator JOHNSON. Have you ever been delayed at all by the lumber situation?

Mr. SAWYER. We have not been delayed as much as the others, simply because we had a large stock of material in our yard that we could use; and they allowed us to use our native hardwood for our floors. I took that up with the Shipping Board and the American Bureau of Shipping.

Senator JOHNSON. Do you know anything about the delays that have been occasioned because of the difficulty in obtaining lumber?

Mr. SAWYER. If I had to depend on the Government schedule that they were to furnish to me, I should have had a keel laid by this time, and that is all. I have the frame all up now, as it is.

Senator JOHNSON. And that is only because of the fact that you had your own supply?

Mr. SAWYER. I had my own supply.

Senator JOHNSON. But if you had had to depend upon the Government under your contract, you would only have had a keel laid by this time?

Mr. SAWYER. I would have had only a keel laid. And here is another thing that would help out: If you would let us builders up there use that native wood, we could get the frame out and have it pretty well along before we would need that yellow pine; and that would help us in starting the ship.

Senator JOHNSON. Are you forbidden to use your native woods?

Mr. SAWYER. No; the schedule was made up for a yellow-pine ship; it required a little heavier yellow pine than we could get.

Senator JOHNSON. What is the tonnage of the ship that you are building?

Mr. SAWYER. Three thousand five hundred tons dead weight.

Senator JOHNSON. You spoke of the prices of the two kinds of timber. Is there any difference in the prices?

Mr. SAWYER. We buy our frame timber in a different way; we send our molds right into the woods. There is a man there that has gotten out this frame timber for us; he gets this frame timber out, and he sends it to us all ready to put together when it comes in. Now, if we can get the frame started in that way it gives us more time for the yellow pine. We figure that it takes about three months until we can get our frame in. The public has been misled into thinking that these ships could be built as soon as the contracts were let. But it is a slow process.

Senator NELSON. How many ship ways have you?

Mr. SAWYER. There are eight in the yard. But we have let five of them go to pieces; we found that we could operate the three large ways more efficiently.

Senator NELSON. Now, suppose you should get contracts for two more ships of the same kind as the one you are building?

Mr. SAWYER. I have two more ways available; one is ready now and the other could be in two weeks.

Senator WEEKS. In what time could you get the ships completed?

Mr. SAWYER. I ought to have at least nine months for the first ship and then follow them up two or three months apart.

Senator FERNALD. Mr. Sawyer, you are perfectly familiar with woods of different kinds. Do you not consider that those in your State are just as strong and just as durable as the southern pine?

Mr. SAWYER. That is what our ships have always been built of.

Senator FERNALD. Your ships have always been built of those Maine woods?

Mr. SAWYER. Yes; and Bath has been in the shipbuilding business for 75 years. And the ships that went all over the world, went around Cape Horn time and time again, were built of those timbers.

Senator FERNALD. That is an important thing to know.

Senator NELSON. And your frames were then all of oak, were they not?

Mr. SAWYER. They used the hardwood for the floors and the frames as long as they kept it under water; but they always insisted on the oak being above water. Oh, I see what you mean: They used oak in the planking, too.

But since my father's day—they have used yellow pine ever since I can remember it as a child. In the early days they did build it of oak, but they were very small vessels. I can recall one of the largest sailing ships, built by Arthur Sewell & Co.; she was 30 feet longer than this Government ship and 4 feet wider.

Senator FERNALD. To what Government ship do you refer?

Mr. SAWYER. The 3,500-ton ship that we are now building.

Senator FERNALD. That you are now building?

Mr. SAWYER. Yes, sir; the Emergency Fleet Corporation ship. This sailing ship was 5 feet deeper than this Government ship, and she went all the way around the world. And certainly the strain on a sailing ship is tremendous.

Senator NELSON. Did you not, in the old times, use live oak for timber in building ships?

Mr. SAWYER. There is very little live oak up North; that is a southern wood; we did not like to use live oak; it is too hard to work; we got a great deal of oak from Virginia, however.

Senator JOHNSON. With whom did you have your negotiations leading to the contract for the Government ship?

Mr. SAWYER. Through our district officer.

Senator JOHNSON. I know, but with whom in the Shipping Board?

Mr. SAWYER. What do you mean?

Senator JOHNSON. With whom in the Emergency Fleet Corporation?

Mr. SAWYER. On my original contract, I did not take it up with them at all; I took it up with the district officer, and he attended to all of it down there.

Senator FERNALD. And who was that?

Mr. SAWYER. That was Mr. Hand, at that time; he has been replaced now by Mr. Trowbridge.

Senator JOHNSON. Have you had any negotiations with the Shipping Board here, or the Emergency Fleet Corporation?

Mr. SAWYER. I have met Mr. Hurley; I have met Mr. Heyworth, and I know Mr. Ferris quite well. I built one steamer that he designed.

Senator JOHNSON. Was any change made in the specifications of the ship that you were to build after you commenced work?

Mr. SAWYER. Yes; they made that change in the floors.

Senator JOHNSON. Did it delay you in the construction at all?

Mr. SAWYER. I got a special dispensation.

Senator JOHNSON. What do you mean by that?

Mr. SAWYER. I asked to be allowed to strengthen the floor in the way that we had been accustomed to build our ships, and Admiral Bowles permitted me to do so.

Senator JOHNSON. So that any change was not applicable to your contract?

Mr. SAWYER. No.

Senator JOHNSON. Would it have delayed you if you had been compelled to follow the change in the specifications?

Mr. SAWYER. It would have, because it would have necessitated our sending South for those pieces of yellow pine; and those are the very first pieces that you use in the construction of a ship.

Senator JOHNSON. Do you know whether or not that occasioned delay in any of the other shipyards in your State?

Mr. SAWYER. It must have occasioned delay. Mr. Hamlin can probably answer that question better than I can; he is present.

Senator JOHNSON. As a practical shipbuilder, can you state whether or not the change in the specifications was essential?

Mr. SAWYER. I would not have made the change myself.

Senator JOHNSON. Well, did it add to the strength or the desirability of the particular construction?

Mr. SAWYER. Not according to my view.

Senator CALDER. You say you got a "special dispensation"?

Mr. SAWYER. I simply asked them to allow us to carry out our particular construction; instead of building those cross floors up 30 inches deep, as they called for, I showed them that the largest ships built—that is, this ship *Roanoke* that I referred to—her floor timbers were only 16 inches deep, and that ship went all around the world and gave a good account of herself. In fact, all of our Bath ships have done that. I asked them, if they wanted to strengthen that ship, if they would not allow me to put another tier of keelsons in, to put the strength fore and aft of the ship, and put the floor and ceiling 12 inches thick instead of 8; and they allowed me to do that.

Senator JOHNSON. When you speak of "they" allowing certain things to be done, to whom do you refer?

Mr. SAWYER. I refer to the Emergency Fleet Corporation. I wrote to Mr. Ferris and he referred it to Admiral Bowles, and Admiral Bowles gave me the necessary permission to go ahead.

Senator CALDER. Do you think the method of construction that you employed gives just as strong a vessel?

Mr. SAWYER. I think so.

Senator CALDER. And that it did not cause delay and caused very little additional expense?

Mr. SAWYER. It did not cause me delay, because I had the timbers that I could put right in there. A man starting a new yard might not have those timbers, and it might cause him delay, because he

might have to send down South for those timbers. We carry 1,000,000 feet of stock on hand all the time.

Senator CALDER. I was not present at the beginning of your statement. Perhaps you have told the committee the number of ships you are building?

Mr. SAWYER. We are only building one for the Government, and finishing one under private contract.

Senator CALDER. You are only building one for the Government? Have you launched a ship recently?

Mr. SAWYER. We launched in November a ship that carried between 3,500 and 4,000 tons; she was not a steamship; but she was only 7 feet shorter than this ship.

Senator FERNALD. What is the length of this ship?

Mr. SAWYER. This Emergency Fleet ship?

Senator FERNALD. Yes.

Mr. SAWYER. 231.8 feet, I think.

Senator FERNALD. There was evidence produced before the committee last week that a wooden ship of that size would "hog," as it is termed by shipbuilding people. Have you had any experience of any trouble of that kind?

Mr. SAWYER. That is the very thing we try to guard against. There is another protection that this Emergency Fleet ship has, which we have carried out for a number of years, and that is the diagonal strapping. We believe that if this diagonal strapping is properly put on, and the timbers properly put together, it will hold the ships up. We built one 16 years ago, which was 4 feet longer than this Emergency Fleet ship, with just exactly the same beam; she was not as deep—which would be weakening rather than strengthening. That ship has been in constant operation for 16 years, and the dry-dock people told me this, that she had changed only 4 inches in 16 years.

Senator NELSON. What is the durability of these wooden ships?

Mr. SAWYER. The American Bureau of Shipping gives us a class of 15 years, on condition that in 7 years and a half we will open the ship up, so as to see whether there are any decayed timbers in there; and if there are we have to take them out. Then at the end of another 15 years, they open her up again, and they will extend that class to us. Some of those ships are 30 years old and more. I think the iron strapping has solved, to a large extent, this trouble of "hogging."

Now, we differ as to what takes place in the vessel—we shipbuilders and shipping people. A great many of us say that it is the impact of the water which pushes the vessel up in the middle. I have always contended that it is the weight at the ends. She is sharp at the ends, and perfectly flat in the middle; she has not the buoyancy at the ends. That is my view, that the ends drop down, instead of the center being pushed up.

If my view is correct, this iron strapping helps very materially, because we put this big belt strapped around the middle of the vessel, right up near the deck; we let it into the frames. Then we have straps 4 inches wide and a half-inch thick, let into the timbers—let down to an angle of 45 degrees, until they get to the turn of the bilge and get clamped to the timber connected with the keel; it is riveted up, and where those clamps cross the timbers there is a bolt driven

into each timber. You see that makes an iron basket that holds that ship right together. I do not believe that ship will be weak in the bilge; I think she will stand up.

Senator FERNALD. You know the condition of nearly every shipyard in Maine, where it is located, its capacity, do you not?

Mr. SAWYER. I know a good many.

Senator FERNALD. Would it be possible to build more ships in our State than we are now building?

Mr. SAWYER. There are several of the old established yards that have not built any ships.

Senator FERNALD. That have not taken any contracts for the Government?

Mr. SAWYER. No. I do not know whether they want any or not. There are two yards in our city that have been running a great many years; Percy & Small, and Gardner G. Deering; the latter is the oldest man in the shipbuilding business. Deering has been in the business all of his life. And over in Rockland there is the Butler yard.

Senator FERNALD. Have they any contracts?

Mr. SAWYER. No Government contracts; they have contracts. Then there is I. L. Snow & Co., of Thomaston. There are a number of yards that have been used to building smaller vessels, and some of them have not the depth to put up these ships.

Senator JOHNSON. Could you build more ships than you are building now?

Mr. SAWYER. I could take two more Government ships without disturbing my present conditions.

Senator JOHNSON. Have you asked for contracts for them?

Mr. SAWYER. I asked yesterday; yes.

Senator NELSON. How soon could you lay the keels for those?

Mr. SAWYER. I think I have one keel in the yard that I could lay in a very short time, as quickly as I could go over my stock. Of course, everything is frozen there now, and it takes a little time to look over your foundations.

Senator NELSON. Have you any ship on the ways there now?

Mr. SAWYER. Yes; I have one ready; I am going to launch a vessel in two weeks. I launched one a month ago. That cleans up my private work.

Senator FERNALD. But if you were to take any new contracts it would be very much better if you could know while the snow was on the ground, would it not?

Mr. SAWYER. Yes; in getting this hardwood timber we ought to get it right away while the ground is frozen; it is easier to move it then, and the timber ought to be taken when the sap is out of it. If you wait until spring, it is almost impossible to move it.

Senator FERNALD. And the timber is not as valuable as it is in the winter?

Mr. SAWYER. The timber is not as valuable after the sap begins to run.

Senator CALDER. What are your prospects about getting those two Government contracts?

Mr. SAWYER. I do not know. I was not fussy about it; I told them I wanted just enough to keep my organization going.

Senator CALDER. Is the Shipping Board disposed to give you any more ships to build?

Mr. SAWYER. A week ago they told me "No"; but yesterday they said they might give me a few more; they said they would let me know about it to-day.

Senator JOHNSON. Who told you they would not let you build any more ships?

Mr. SAWYER. That was Mr. Heyworth. This might be interesting to you [handing pamphlet to Senator Johnson]. That shows you the range of the vessels that we build; we build everything from lighters to towboats and sailing vessels.

Senator FERNALD. From your knowledge and experience you feel confident that Maine could build more ships than she is now building, do you?

Mr. SAWYER. Yes. But you want to let the shipbuilders there use the Maine timber so far as they can; it would help to relieve this congestion in the South now. Of course, this frame is only one-third of the timber used in a ship, but that is the timber that is giving the shipbuilders and the lumbermen so much trouble to get.

Senator FERNALD. The shipbuilders never did get their timber from the South in the earlier days; it was always Maine timber that they used, was it not?

Mr. SAWYER. They have got quite a lot of it in Virginia. A number of Maine men went down there and made a business of getting out the ship frames.

Senator FERNALD. But it was never considered any better timber, was it?

Mr. SAWYER. Oh, no. The stems and sternposts and those large pieces we have to send down there for.

Senator FERNALD. It was not on account of the quality of the timber, just for convenience that they used that southern timber?

Mr. SAWYER. No; there is nothing better than our northern oak.

Senator FERNALD. There is nothing better than the northern oak?

Mr. SAWYER. And I do not want to give the impression that our timbers are larger than the southern timbers. That is not true; it is simply that we get that crook on the timbers, and that helps us out on the frames. And we believe that makes them stronger.

Senator FERNALD. Mr. Chairman, are there any further questions to be asked of Mr. Sawyer?

Senator NELSON. No; unless you desire to question him further.

Senator FERNALD. Have you any further statement you wish to make, Mr. Sawyer?

Mr. SAWYER. The only thing I was anxious to do was to refute the statement that I have seen published that wooden shipbuilding was a lost art; that there was nobody that knew how to build them now; and that Maine had lost the art of building ships; that she did not know how to build them.

Senator FERNALD. She can build just as good ships as she ever built, can she not?

Mr. SAWYER. I do not see why she can not; we have all the records of all the work that was done in the past; and we are simply trying to keep up the standard that our fathers set before us.

Senator JOHNSON. I think the statement that was made by various experts was that ship construction, shipbuilding, in this country was

a lost art. I imagine that that statement applied, generally speaking, to shipbuilding. But that is not true, so far as the State of Maine is concerned?

Mr. SAWYER. We do not think so; we do not like to feel that way about it.

Senator FERNALD. Senator Sherman would like to know, Mr. Sawyer, about the labor in Maine, the carpenters and the class of men that are required for building ships. Do you take ordinary carpenters?

Mr. SAWYER. No; a ship carpenter is a somewhat different proposition from a house carpenter. The ship carpenter is a man that has to use the broadax and the adze, which the house carpenter has very little occasion to use those tools.

Senator NELSON. And he does not know how to use them.

Mr. SAWYER. That is correct. The house work is all built on the square; that is, with the plumb and the level. On a ship there is hardly a right angle in her, hardly a straight line.

Senator SHERMAN. Have you an adequate force in Maine of ship carpenters without training additional ones?

Mr. SAWYER. No, sir; we have to gradually break them in. Most of our ship carpenters, as I have said, are older men. Our organization, as I have said, is composed of men that have been with us right straight along.

Senator NELSON. Do you take in any apprentices, then, to increase your supply of labor?

Mr. SAWYER. When we find that a young fellow wants to go ahead, we take him in and train him and try to push him ahead. They are more anxious to come in now than they were a while ago.

Senator CALDER. But you can get the labor; it is obtainable, is it?

Mr. SAWYER. I think so. Of course, there are tremendous demands on labor in every direction.

Senator FERNALD. What are you paying your ship carpenters?

Mr. SAWYER. We are paying our ship carpenters 55 cents an hour for eight hours and time and a half for the extra hour. That practically puts them on an eight-hour basis, but we are working them nine hours in order to push the work along. That gives them about $5.25 a day.

Senator CALDER. Are the unions very strong in Maine?

Mr. SAWYER. We have not had a union in Bath; that is, among the ship carpenters. We have had no trouble that way. The situation is simply this: I will go up to the yard some morning and I will find the men sitting around doing nothing. I will ask them, "What is the trouble?" They will say, "We ought to have more pay." We talk it over and adjust it then and there. We have had no serious trouble at all. That is simply due to the fact that they are men who have been with us so long, and whose homes are there.

Senator NELSON. What is the nature of your contract with the Government?

Mr. SAWYER. It is a lump-sum contract.

Senator NELSON. A lump sum for the ship?

Mr. SAWYER. For the hull.

Senator NELSON. For the hull? You have nothing to do with the——

Mr. SAWYER (interposing). Machinery.

Senator NELSON (continuing). Putting the "insides" into the ship?

Mr. SAWYER. Nothing at all. I do not want anything to do with that; that is out of my line of business.

Senator FERNALD. You prefer to take a contract on that basis, do you not?

Mr. SAWYER. Yes, sir; that is another class of work.

Senator FERNALD. But you prefer to take it as a lump-sum contract?

Mr. SAWYER. No; I think the cost plus is a safer proposition.

Senator FERNALD. Are there any of those contracts in Maine that you know of?

Mr. SAWYER. I think they are all on the lump-sum basis.

Senator FERNALD. All of them are on the lump-sum basis?

Mr. SAWYER. Yes, sir.

Senator FERNALD. Do any of the members of the committee desire to ask any further questions? If not, that is all, Mr. Sawyer—unless you have something more to say.

Mr. SAWYER. Nothing at all, thank you.

Senator FERNALD. Mr. Chairman, Mr. Hamlin, of Portland, Me., is present. Mr. Hamlin is another gentleman from Maine who is building a great many ships of his own and for other people and is very conversant with the conditions there. I suggest that the committee hear Mr. Hamlin now.

STATEMENT OF MR. JAMES C. HAMLIN, PORTLAND, ME.

Senator FERNALD. Mr. Hamlin, will you give your full name?

Mr. HAMLIN. James C. Hamlin.

Senator FERNALD. And your home?

Mr. HAMLIN. Portland, Me.

Senator FERNALD. And your business?

Mr. HAMLIN. I am in a somewhat different position from Mr. Sawyer. I am a financier and a builder of ships; in the first instance, in our own trade, we are owners of timber, in Arkansas, largely, and to some extent in Maine; and in connection with the shipment of our supplies our business is all foreign; we export. In former days we had to build our own fleet of ships for our own trade. That is, we hired builders, like the Sawyers, to build ships, and kept watch of the buildings and financed them. That is what I am doing to-day. I have a company which I organized, and which is subsidiary to my company, which is J. H. Hamlin & Son. We did it simply on the emergency requirement; we did not care to go into shipbuilding so long as we could charter. But when the Shipping Board was first organized, they, in some way, learned that we were forest owners; that we had large tracts of white-oak timber in Arkansas. And they communicated with me and wanted to know if we would be interested in establishing a yard of our own.

Senator FERNALD. You are speaking now of the Shipping Board?

Mr. HAMLIN. Yes; the Shipping Board. That is, J. H. Hamlin & Son were asked if they would not interest Maine shipbuilders in this emergency requirement. We took this emergency shipbuilding up more from patriotic duty than from any profit that we expected to get from it or any increase of our business, because our export-

ing business requires all of our attention; that is, until we organized this new company.

Senator NELSON. Do you mean your export of timber?

Mr. HAMLIN. Our export of timber. We export to all parts of Europe and largely to the West Indies and South America.

Senator NELSON. That is, your oak timber?

Mr. HAMLIN. Our oak timber. And also a good part of it is cut up into small packages for containing the rum, alcohol, and wines which are made in South America, in Europe, and in the West Indies.

That was the commencement of our present interest in shipbuilding, although for four generations my family have been connected with the ship industry in the way of building our own ships—that is, of hiring shipbuilders to build them and running a fleet of our own. If I were allowed to go on, I could tell the history of our connection with this Emergency Fleet Corporation.

Senator FERNALD. I think the committee would be very glad to hear that, Mr. Hamlin.

(Senator Simmons entered the committee room.)

Mr. HAMLIN. When Mr. Denman first took charge of the Shipping Board he sent his representative to Maine, to our office, to see what we could do toward interesting Maine shipbuilders.

Before any request was made I sent one of my best men from my office throughout Maine to interest Maine shipbuilders; and we held a meeting in my offices in Portland of about 30 of the Maine shipbuilders.

And at that time Maine shipbuilders were not very much interested in Government business, for the reason that more or less of them had had experience with Government work and the technicalities which were required in Government work. But, with the explanation of the agent of the Shipping Board, we felt that the Shipping Board was going to be very liberal in all their arrangements and all their business with this emergency-fleet shipbuilding; and we did interest quite a number of the shipbuilders, and we also ourselves became interested.

The consequence has been that my firm of J. H. Hamlin & Co. has financed the Cumberland Shipbuilding Corporation and built an outfit, a shipbuilding yard, in South Portland, just across the bay from Portland, and we have a personal outlay there of nearly half a million dollars.

Senator NELSON. That is a new yard, is it?

Mr. HAMLIN. That is a new yard.

Senator NELSON. And you financed the building of it?

Mr. HAMLIN. We financed the building of it; we did not ask the Government to finance a dollar of it. We simply put our own money in it as against the Government requirements. And we said, "When we get our yard built we shall expect to have a contract to keep that organization going." And we did obtain a contract for nine of the emergency ships.

Senator NELSON. Wooden ships?

Mr. HAMLIN. Wooden ships. There was a long delay in giving out the contract on account, as I understood, of some changes in the type or build of the ships, adding more or less to them. We finally got our contract as soon as the yard was ready. We were not delayed

at all in our building because we went on to work and equipped our yard.

Senator NELSON. The change that was made in the wooden shipbuilding program was made before you commenced work?

Mr. HAMLIN. Yes, sir; before we commenced. We did not get our contract until late in August—August 20, I think it was. So we were not embarrassed by that change to the second type.

Senator NELSON. What timber do you build those ships of?

Mr. HAMLIN. We are building on Government specifications.

Senator NELSON. Of southern pine?

Mr. HAMLIN. Of southern pine and west coast fir. And our contract specifies that we shall build from the material which the Government furnishes, and they furnish everything to us except the iron for strapping, and I think the knees we get in Maine, and some of the minor material.

Senator NELSON. You only build the hulls?

Mr. HAMLIN. We only build the hulls.

Senator NELSON. When are you to have those ships ready?

Mr. HAMLIN. We were to have them ready, the first one of them in May; then they were to follow along a month apart.

Senator NELSON. Next May, and so on?

Mr. HAMLIN. Next May. But on account of the necessary delays—we made no criticism of the Emergency Fleet——

Senator FERNALD (interposing). What necessary delays?

Mr. HAMLIN. On account, in the first place, of the disappointment which the Southern Pine Association gave to the Emergency Fleet Corporation in not furnishing what they had agreed, as I understand. In other words, they "welched" on their agreement to supply the Government with the material which they had promised. Therefore the Emergency Fleet Corporation had to go to the west coast to make up for that deficiency. It was a serious delay to us, and it rather disturbed our organization. But it was an affair which could not be helped, and consequently we had to make the best of it.

Senator NELSON. How many ways have you?

Mr. HAMLIN. We have four heavy ways, with a fifth one under construction now.

Senator NELSON. How many keels have you laid on Government ships?

Mr. HAMLIN. We have laid two keels, and we only commenced about three weeks ago, when we had our material to commence laying the keels. But those keels have been laid not from the material that the specifications actually required, because it came along so much mixed up that we thought we had better not wait but had better go along with laying the keels. We did not want to make the Government responsible for any delay, and the consequence is that we have two keels laid and the material for the first ship right straight along.

Senator NELSON. You are using some of the native timber there, are you?

Mr. HAMLIN. No native timber, except the knees and a few pieces of oak, which we required to make up for the deficiency in the Government timber.

Senator NELSON. What is the form of your contract?

Mr. HAMLIN. Lump-sum contract.

Senator NELSON. The same as Mr. Sawyer says he has?

Mr. HAMLIN. Yes.

Senator FERNALD. Are there any contracts in Maine on any other basis.

Mr. HAMLIN. None in Maine that I know of. There are different forms of contract, but they are all practically on the same basis. There were some minor changes in the contracts made from time to time; we had practically the same contract, although we were the first to interest ourselves with the work.

Senator FERNALD. I would like to have you state, Mr. Hamlin, about the woods in Maine, as compared with southern pine.

Mr. HAMLIN. My experience has been, and is now, that we not only can get the material from Maine for building ships, but we have 15 or 20 mills in Maine that are all the time turning out hardwood to ship to the West Indies. And I am confident that, if the marine architect will so work out his schedules, that we can get all the material that is needed in Maine for the frames——

Senator NELSON (interposing). For the frames?

Mr. HAMLIN. Yes; and that is the principal part. The planking will always have to come from the south or the west coast, as has been customary, as Mr. Sawyer said. We have excellent timber, and, as Mr. Sawyer said, the way in which we can work our timber with the natural crooks, gives a much better and a far stronger ship, with lighter timbers; as he says, when you cross the grain you weaken your timber. And that is what has to be done with the southern or west coast timber. If we can take timber with natural crooks, we have something that will not split. If you are sawing out your flitches with two or three turns, you are going to cross your grain once or twice, and that makes a weaker piece.

Senator NELSON. Yes; it is self-evident that if you can use the natural crooks in the timber, made by nature instead of in a sawmill, it will be stronger.

Mr. HAMLIN. That is the advantage of having timber obtained from a country where you can get the natural crooks.

Senator JOHNSON. You said, Mr. Hamlin, that your first ship you expected to have completed in May, and one a month thereafter. Will you do it?

Mr. HAMLIN. No; we can not do it, on account of the delay in the arrival of our material. We have only had the material in our yard—we have handled 4,000,000 feet in our yard in the course of the last two or three weeks. We have got 200 cars on the way now; it is coming along very freely now; but there was about two or three months delay when we practically got nothing.

Senator JOHNSON. And what sort of timber is coming to you now?

Mr. HAMLIN. Some southern pine—and largely also from the west coast.

Senator JOHNSON. To be substituted for southern pine?

Mr. HAMLIN. I suppose it was; yes.

Senator JOHNSON. When will you have your first ship completed, do you think?

Mr. HAMLIN. If we get our material, and the right sort of pieces that we commence ships with, we could build one hull in about six months from the time we started.

Senator JOHNSON. Will you give me an estimate of the time of completion, if you please?

Mr. HAMLIN. Well, we commenced, say, three weeks ago; that is, say, the latter part of December. Probably in June, if we have no setbacks, and the lumber comes along in the proper shape, we can put enough men on; we have the facilities; we have all the modern improvements in the way of machinery.

Senator JOHNSON. That means you have been delayed only a month, then?

Mr. HAMLIN. Oh, we have been delayed at least two months. You see, we took our contract August 20, and we should have commenced in November to build the ships.

Senator JOHNSON. In order to get one out by May?

Mr. HAMLIN. Yes—no; the 1st of December, say.

Senator JOHNSON. Have you facilities for building more than the number of ships yon now have under contract?

Mr. HAMLIN. We have not the facilities at the present time, but we are anticipating that with the requirement for getting out Maine timber, which I think is the proper way for building a ship in Maine—if possible, we ought to have the winter, as Mr. Sawyer says, to get the timber out in proper shape, with the snow on the ground and also when the sap is out. If not, we want at least 12 months.

Senator JOHNSON. Has anything else delayed you besides the delay in shipping the southern pine lumber?

Mr. HAMLIN. Nothing.

Senator JOHNSON. Are you familiar with the specifications that were first made, and then with the subsequent change?

Mr. HAMLIN. Yes; generally.

Senator JOHNSON. Was the change essential?

Mr. HAMLIN. I can not say that I think it was. I am not an expert shipbuilder; but from my chief constructor, who is an expert—and his father before him was an expert—in shipbuilding, I learned that he does not think the changes made will add very much, if anything, to the strength of the ship. And it naturally throws out considerable tonnage.

Senator JOHNSON. How many men are under employment in your yard?

Mr. HAMLIN. We have to-day, I suppose, 200; we have 1,000 men on our list waiting.

Senator JOHNSON. So that probably your difficulty as to getting employees——

Mr. HAMLIN (interposing). Is nil, so far as we know at present. In fact, they are coming to our offices every day and registering.

Senator JOHNSON. So that you could undertake much more work, could you?

Mr. HAMLIN. We could keep those ways going.

Senator JOHNSON. With whom did you negotiate; with what individual connected with the Shipping Board or the Emergency Fleet Corporation?

Mr. HAMLIN. Our first correspondence came through the Shipping Board; I think, Mr. Denman; then, finally, Gen. Goethals. Gen. Goethals was very anxious that all the ships that were possible should be built—wooden ships and steel ships; at that time steel ships had

not been so prominent as since that time. Finally, our negotiations were concluded through Admiral Capps. For some reason or other—I do not know what it was—although we were expecting a contract, it was held up; I imagine until these changes could be determined upon.

Senator JOHNSON. Has any suggestion been made to you about the desire to build no more wooden ships, or a desire to continue construction of that kind?

Mr. HAMLIN. While I have had no definite statement from the Emergency Fleet Corporation that they would not build any more ships, some time ago I got the idea that they were opposed to building more wooden ships. But recently it seems to me that their idea has gone exactly to the contrary.

Senator FERNALD. How recently have you noted that change in sentiment?

Mr. HAMLIN. I have only noticed it in, perhaps, the last month.

Senator NELSON. That must be the effect of the investigation by this committee. [Laughter.]

Mr. HAMLIN. Well, I do not know what it is the effect of; but there is a decided change in ideas; they are no just contrary to what they were. I have read a good deal of the testimony given during this investigation by your committee in regard to the impracticability of wooden ships. But I can tell you gentlemen that I have been in the shipping business, or my firm has, for over 70 years; that is, we have run ships that long. And I know you have got to have the wooden ships, no matter how many steel ships you get, because there is a certain trade—we know it in our business—that steamers are not practicable in. For instance, you can not send a steamer down to the West Indies on account of the lighterage necessary and get her back in time; consequently, a wooden ship that will allow you more days for passage will give you better returns. I have several now under charter. We are loading now steamers from the South to the West Indies, and we will be loading from Portland to-morrow to the West Indies if they do not commandeer our sailing ship that is just coming off the stocks.

Senator JOHNSON. Mr. Hamlin, I think I am quite within the mark when I say that the expert testimony given before this committee as to the different classes of ships is substantially this, that the experts would all prefer steel ships, but in the emergency they would be glad to have both steel and wooden ships. Is that correct, Senator Nelson?

Senator NELSON. That is about the way I understand it.

Mr. HAMLIN. I can not agree with that idea, for the reason that the steel ships, in order to be built and operated economically, must be of large tonnage. The wooden ships can be of smaller tonnage, and can be fit into a trade that the steel ships will not be adapted to; that is, they will not be economical to run in it.

Senator JOHNSON. How about crossing the ocean?

Mr. HAMLIN. A wooden ship, if properly built, in the way that I know that Mr. Sawyer, Kelly, Spear & Co., and other builders can build their ships, is just as capable of trans-Atlantic service as a steel ship. Mr. Sawyer spoke of the *Roanoke*, that ran around the Horn; she was a large four-masted sailing ship, with a heavy top hamper, and, loaded with coal, she would go around the Horn in heavy weather; and she kept that up until she was finally lost.

Senator NELSON. And she was not nearly so liable to sink?

Mr. HAMLIN. No. I think the whole idea of discouraging wooden ships in favor of steel ones has been rather exaggerated.

Senator JOHNSON. I observe in the list of ships constructed by Mr. Sawyer, which he handed me, that probably the ship that he is constructing for the Government now is the largest he has ever undertaken to construct. Is that a fact, that those ships that are now being constructed for the Government are larger than those you have been accustomed to construct in Maine?

Mr. HAMLIN. I should say the majority of the ships constructed in Maine are of smaller tonnage; but there are a great many ships constructed there that are fully as large as these ships, or larger. Take the Sewall ships, for instance; they launched the *Roanoke*. The Sewall yard put out large tonnage ships.

Senator NELSON. You have built some large schooners there, have you not?

Mr. HAMLIN. We have built schooners of four or five thousand tons that have been carrying coal for years.

Senator NELSON. Some of them are 6-masted schooners?

Mr. HAMLIN. Some are 7-masted. None of them have had any tendency to founder; sometimes they would be dismasted; but none of them have proved weak on account of their size, and they have all been carrying heavy cargoes.

Senator JOHNSON. Is there any contract by the Government with you, or with the establishment that you represent, concerning the yard that you have constructed—that is, as to its ultimate taking over by the Government?

Mr. HAMLIN. None whatever.

Senator JOHNSON. Or providing reimbursement, or the like?

Mr. HAMLIN. None whatever. We have gone into it and put our money into the yard on our own account, and as I told the committee in the first instance, largely from a patriotic desire to help the Government in an emergency.

Senator JOHNSON. I did not understand the amount you said you had expended in that yard?

Mr. HAMLIN. About half a million dollars; there are a lot of additions that we are now putting in. We have a yard that is quite different from the old-fashioned yards. Our ways will cost $50,000 each. They are built on heavy piling, and they are capable of carrying steel ships as well as wood.

Senator NELSON. You are building that yard with your own money, and the Government is not putting up any money for it?

Mr. HAMLIN. Every dollar of it is our money. Up to the present time, the Government has not financed a dollar. I have financed the whole thing.

Senator NELSON. And the plant and the land are all yours?

Mr. HAMLIN. Yes.

Senator NELSON. May I ask you one or two more questions? First, do you believe you could expedite the building of these ships if you were permitted to use Maine timber for the frames?

Mr. HAMLIN. Not with these present contract ships, because it would take at least all this winter to get out the timber from Maine; it ought to season more or less, and it would be the next winter before that timber would be fit to put into a ship.

Senator NELSON. The next question is this: It has been suggested here that you might work in three shifts. How long do your men work?

Mr. HAMLIN. Eight hours.

Senator NELSON. Would it be possible—have you the facilities and could you get the men so that you could expedite the work by having two or three shifts?

Mr. HAMLIN. Yes, sir; our plant is thoroughly lighted by electricity

Senator NELSON. You could hasten the work, then, by having two or three shifts?

Mr. HAMLIN. We could hasten the work as soon as the weather gets suitable; but the efficiency we would get out of night shifts under the present weather conditions would not pay. After the warm spring weather comes on, we could work three shifts in 24 hours.

Senator NELSON. And you could get the men there?

Mr. HAMLIN. Up to the present time there is no question about that; I do not know what may occur; they may be drawn away in other directions.

Senator NELSON. Are ship carpenters plentful up there?

Mr. HAMLIN. Old-fashioned ship carpenters, or shipwrights, are not so plentiful as they were 25 years ago. But there is a nucleus there whereby good, practical carpenters could be trained into ship carpenters, because a large part of the manual labor that was heretofore done by shipbuilders is done by machinery now. For instance, we have outlays of compressed-air power; we have borers with compressed-air power; in connection with those borers we have compressed-air drivers to drive the rivets and the bolts; and there is a lot of machinery that we have now to take the place of hand labor; that is where the expense of our yard has grown up. I think it is the most expensive yard, outside of Portsmouth, that there is on the Atlantic coast; and that is because we put in the machinery to expedite construction. We have the facilities to handle all the lumber that comes in with speed. The yard is covered with a steam-power derrick; our machinery is run by electricity—the principal machinery.

Senator NELSON. You could then, when warm weather sets in, rather hasten your program and make up for lost time to a great extent?

Mr. HAMLIN. I think we could do it, unless something comes up that I can not foresee.

Senator NELSON. You have had no labor troubles there?

Mr. HAMLIN. None whatever.

Senator NELSON. What are the wages that you pay ship carpenters?

Mr. HAMLIN. I think it is 50 cents an hour; about 55.

Senator NELSON. And you work on an eight-hour basis?

Mr. HAMLIN. An eight-hour basis; yes, sir.

Senator NELSON. That is all I have to ask.

Senator FERNALD. Is there anything further you would like to say, Mr. Hamlin?

Mr. HAMLIN. I do not know of anything more than simply to say that I consider the shipbuilding facilities of Maine equal, if not superior, to those of any other part of the United States. We have the practical men; we have had the reputation for a hundred

years or more of building the finest ships in the world, almost, in the way of wooden ships; and we have the material, if they will conform to our requirements as to timber, to build, I think, a stronger ship than is being built to-day.

Senator NELSON. I want to say to you, Mr. Hamlin, that I have no doubt in my own mind, but that this is only my own individual opinion, that in expert shipbuilders for building wooden ships you are better equipped in Maine than they are in any other part of the country.

Mr. HAMLIN. I am glad to hear that.

Senator NELSON. Because the industry in your State has been a continuous one.

Mr. HAMLIN. Yes. You see, as Mr. Sawyer said, his business, with his father and himself, has lasted over 50 years. My business has come down for four generations; it is a family business; there is no one outside of my own family who is interested in the work at all.

Senator NELSON. And it is no discredit to other parts of the country that Maine should excel, because they have been engaged in other enterprises while you have followed shipbuilding there as a constant industry.

Mr. HAMLIN. You have exactly the right idea. I do not want to discredit the Pacific coast people or the Gulf people.

Senator NELSON. No.

Mr. HAMLIN. They have the timber there, and they can build the ships; they can build them on time, no doubt. But if the Government wants durable ships, they can not cut them out by piecemeal; they have got to build them properly, and sufficient time must be given. If you are going to saw them out in one block and put them together, I have no doubt the West coast and the Gulf coast can do it very much more quickly than we can, because they have got the material there and the lumber.

Senator NELSON. Well, of course, the wooden-ship building industry on the Pacific coast, as well as the other shipbuilding, is of more recent origin than yours?

Mr. HAMLIN. Very much so, because the Pacific coast lumber has not been known more than 25 years. Of course, they have built ships out there for a long time. But I would say this, that every ship built in Maine I would like to buy back, every ship that we are building for the Government I would like to buy back after the Government is through with them for our trade. I have tried to get the Emergency Fleet Corporation to allow us to build some ships for ourselves; we are very much in need of them. We can not charter; we can not get our lumber over to Europe, the lumber that is needed by the French Government and the West Indies; and I have been trying to get a chance to build my own fleet again to replenish what has been lost. But the Emergency Fleet Corporation—quite properly—is of the opinion that Government work and private work should not be mixed, and I am satisfied that that is the best way to prevent any questions arising.

I want to say this, that for years before this emergency came up I have been writing articles for magazines and delivering addresses, trying to arouse interest in a comprehensive shipbuilding plan for this country, and calling attention to the absolute necessity for such a plan.

Senator NELSON. Do you not think that the carrying out of this shipbuilding program that we have now embarked upon will help ultimately to restore our merchant shipping?

Mr. HAMLIN. If it is kept up long enough. But you can not build enough ships to take the place of those that will be required after this war; you can not build enough either of steel ships or of wooden ships.

Senator NELSON. Well, evidently a good many of these contracts are extended over such a length of time that it will be long after the war before they are completed; I expect the war to end during this calendar year.

Mr. HAMLIN. Let us hope so.

Senator NELSON. And the contracts run over another year.

Mr. HAMLIN. Well, Senator, if they ran over five years it would not suffice on any shipbuilding program that you can put through; that is my opinion; and I am looking forward to the greatest difficulty after the war; fully as much difficulty as to bottoms for carrying our cargoes as we are now having.

Senator SIMMONS. What amount of tonnage do you think we will need after the war in order to give us a reasonably adequate merchant marine?

Mr. HAMLIN. Well, that would be a pretty hard thing to state offhand. I do not think we have facilities in this country to build all the tonnage we will need for the next five years for the mercantile marine.

Senator SIMMONS. Do you think, if Congress should make adequate appropriation to keep the shipyards at work, it will take them five years to build an adequate merchant marine?

Mr. HAMLIN. Yes; to get up to the condition we were in before the Civil War. Unfortunately, we sold out our shipping after the Civil War; there is where our decadence commenced, in allowing our tonnage to get out of our hands after the Civil War; and we have never been able to bring it up again to the point it occupied before then. I look for high freights to continue; that is going to stimulate shipbuilding. If I was in a position to do so, I would much prefer to go into private shipbuilding than Government shipbuilding because there is very much more profit in it.

Senator SIMMONS. Suppose the Government should carry out its present program and private interests or private capital should heartily cooperate after the war—there can not be much cooperation now—in the construction of ships, with Government and private capital both enlisted and trying to rehabilitate our merchant marine do you think it would take five years to do so?

Mr. HAMLIN. I do not think you will get the merchant marine back to the condition we will require in five years.

Senator SIMMONS. You are not now referring simply to the Government construction, are you?

Mr. HAMLIN. I mean merchant marine for carrying our exports and for handling our coastwise trade.

Senator SIMMONS. Well, by reason of this scarcity of ships, if the war should terminate now and the Government stop its program of building, do you not think that private capital would be induced by the conditions to go more largely into shipbuilding than it has heretofore?

Mr. HAMLIN. I think it would, but not to the extent necessary, for the reason that it requires a very extensive outlay in a modern yard to build ships at the present time. And the capital that is available for that is limited; I mean to say the present shipbuilding plants that are able to carry out a plan in shipbuilding. There are a number of small yards, no doubt, that would continue their shipbuilding. But I think one great advantage of the Shipping Board and the Eemergency Fleet Corporation in stimulating shipbuilding is that they are giving these contracts so as to enable the establishment of large yards.

Senator NELSON. One of the results of the operations of the Emergency Fleet Corporation is to give us a lot more of shipyards?

Mr. HAMLIN. Yes, sir.

Senator SIMMONS. You will have ample shipyard facilities when the war closes, will you not?

Mr. HAMLIN. Yes, sir.

Senator SIMMONS. You will have the Government in the business?

Mr. HAMLIN. Yes, sir.

Senator SIMMONS. And you will probably have some of the impediments to the rehabilitation of a merchant marine in this country removed, will you not?

Mr. HAMLIN. You will have to make some change in the laws; to a very great extent they are antiquated.

Senator SIMMONS. Do you think a change in the navigation laws would remedy the evils under which we have heretofore operated?

Mr. HAMLIN. Absolutely. That is one of the conditions that have kept shipbuilding back heretofore; we could not compete with the English and the German ships on account of their low expense of running, their restrictions being very much less in the way of their seamen and all the conditions that apply to sailors, and they have had at least 25 per cent advantage, if not more, over us for the last 15 years.

Senator SIMMONS. You think that could be overcome by a modification of our navigation laws, do you?

Mr. HAMLIN. By a reasonable modification of our navigation laws.

Senator SIMMONS. You do not think it would be necessary to resort to the old scheme of subsidies?

Mr. HAMLIN. I have not been in favor of subsidies. But when you want a thing, you have got to pay for it, and if you can not get it in any other way, I should say, subsidies; but I believe there are other ways to get the ships besides a subsidy.

Senator SIMMONS. I want to ask you one question here. These vessels that you are building are all sailing vessels?

Mr. HAMLIN. No; we are building these Government ships, the same as Mr. Sawyer. We are building nine of the Government ships.

Senator SIMMONS. Propelled by steam?

Mr. HAMLIN. Propelled by steam—or by power; I suppose it is steam.

Senator SIMMONS. What is the tonnage of those ships?

Mr. HAMLIN. Twenty-seven hundred tons net.

Senator SIMMONS. You are building only the hulls?

Mr. HAMLIN. That is all.

Senator SIMMONS. How long did you say it took you to build the hull?

Mr. HAMLIN. Six months at least.

Senator SIMMONS. After you have finished with the ship how long will it take to finish it?

Mr. HAMLIN. That is a question. I could not say that, for the reason that we do not install the machinery. I can not tell that, but if the machinery is ready for installation, I suppose it would take a couple of months anyhow to do it.

Senator SIMMONS. It would not take as long to do that as it takes to build the hull?

Mr. HAMLIN. Oh, not at all. If the machinery was ready, I should say it would take probably a couple of months.

Senator NELSON. I think the testimony here was, Mr. Hamlin, that if everything was ready they could do it in from two to three months.

Senator SIMMONS. I probably should beg the pardon of the committee for asking these questions, because, you understand, I have not been here throughout your inquiry.

(Senator Fletcher entered the committee room.)

Senator FERNALD. I was about to remark, Mr. Chairman, that this completes the arrangement I had made with Senator Fletcher. The vice president of the Cumberland Shipbuilding Co. is here, but his testimony would be about the same, as I understand it. There is another gentleman here whom I did not arrange for this morning, but Senator Fletcher had requested Mr. Hudson Maxim to be here at 3 o'clock this afternoon, so I do not know whether the committee would care to go on any further.

Senator JOHNSON. Before Mr. Maxim begins I should like to ask this gentleman a question. As a matter of curiosity, let me ask you, what are the antiquated navigation laws to which you referred?

Mr. HAMLIN. Well, it is the restriction on the food to the seamen; you have got to treat a seaman with all the delicacies of a club—there are lots of things.

Senator JOHNSON. That is, those are the antiquated laws to which you referred?

Mr. HAMLIN. Yes; the old navigation laws which have been in force for years and do not apply to present conditions. I do not say that a seaman should be abused in any way, but I say we ought to go in the open market and get our seamen where we can.

Senator JOHNSON. That is all.

STATEMENT OF MR. LUTHER MADDOCKS, SHIPBUILDER, BOOTHBAY HARBOR, ME.

Senator FERNALD. Will you state your full name, Mr. Maddocks?

Mr. MADDOCKS. Luther Maddocks.

Senator FERNALD. And your business?

Mr. MADDOCKS. I am interested in vessels of all kinds and have been all my life. I am manufacturing fertilizer at the present time and have been a wholesale ice dealer and sardine packer.

Senator FERNALD. I wish you would go on and tell us what you have to say about the shipbuilding business.

Mr. MADDOCKS. Last spring when the Government sent out the first proposition for building these vessels on a 10 per cent basis I thought I could do it. I had the men; I had 165 good men; and I

had two yards at my disposal; I have three now. I signed the papers that they sent me and sent them in. They sent down there a naval expert from Boston, who looked my premises over. They made a very favorable report; said it was all right.

About that time they let up on putting out those contracts. I took one of the other contracts—the $300,000 contracts—in my hands and examined it, and I had experts go over it, and I did not see where I could get out on it. I am not a millionaire, and I did not feel like jeopardizing what little I had in this world on a contract like that, which I knew I could not fulfill and get my money back. So I kept right on in my own business; but I have never felt satisfied with myself. I felt as if I had the ability to assemble a ship, to build it. In the towns around where I live we have lived on building ships and vessels of all kinds and going to sea. We are a seagoing people. There are 10 vessels under contract now in my town, right in sight of where I live.

Senator NELSON. For private parties?

Mr. MADDOCKS. For private parties; vessels averaging about 1,000 tons. At Round Pond, which is adjoining, I have a nice yard there, with wharves, buildings, blacksmith shop, and an old-fashioned outrig for building ships, and it is there that I calculated to build the emergency ship. I enrolled 165 good men. I was going to put on three shifts. In that town there was plenty of chance to accommodate men from outside. There used to be a large gang of men working there in the quarries, and they had to have a place to live.

Senator NELSON. Have you many ship carpenters there?

Mr. MADDOCKS. Just about the same as the average all over this country just now. We have some of the old men. At East Boothbay, which is the adjoining town to mine, they take one man who has had experience, and they give him five men and tell him, "Go to work and do the best you can." One man with five men keeps them going pretty well, and they are doing first rate. It is a success.

Now, somebody said that shipbuilding was a lost art. It is not exactly that, but it had been run very slowly.

Senator NELSON. If you could get a Government contract immediately, in what time could you have the hull of a ship completed?

Mr. MADDOCKS. That would depend on circumstances.

Senator NELSON. If you had the contract immediately.

Mr. MADDOCKS. If you put the material in the yard, I can get it together in six months.

What I came here for more especially is this: I understand the board wants some tugs. I have been in the tug business, I have built a dozen on this coast and I built one in San Francisco. I feel pretty competent to judge the cost of a tugboat, machinery and all. Of course, I would have to investigate, but that has been part of my business, my specialty. If the Government wants any tugboats built, and I can see a chance to get my money back, I would like to do it. I would like to build an emergency ship if I could do it and get my money back. I can not afford to lose. I do not want to boast of being a millionaire, or anything of that kind. I have not got $500,000 to put into a yard, and I do not think it is necessary.

The way we build vessels down my way we do not use many machines. We have planers, we have saws, and we have compressed

air and all that sort of thing, but that is not a very great expense. I have the buildings, the wharves and the plant to put up half a dozen ships.

Senator NELSON. Could you get them built within a year?

Mr. MADDOCKS. Oh, if I put my whole nerve and energy into it——

Senator NELSON. Provided the material was there?

Mr. MADDOCKS. Provided the material was there and there was no delay. We have a great many men along our coast who have worked a great deal building small boats, and that is the class of men I would employ. I have a foreman who has spent his life in the shipbuilding business. He is capable of laying down, drafting, and doing every part of it.

I feel just this way. I do not care to lose anything, but I feel it is my duty and every other man's duty to do all he can.

Senator NELSON. We are very much obliged to you.

Senator FERNALD. Mr. Maxim has been asked to come here, Mr. Chairman.

STATEMENT OF MR. HUDSON MAXIM, MAXIM PARK, LANDING POST OFFICE, N. J.

Senator NELSON. Will you go on, Mr. Maxim?

Senator FERNALD. Please state your full name.

Mr. MAXIM. My name is Hudson Maxim.

Senator FERNALD. Where do you live?

Mr. MAXIM. I live in the borough of Hopatcong, Landing Post Office, N. J.

Senator FERNALD. Mr. Maxim was requested, Mr. Chairman, by Senator Fletcher to come here. I do not know the line that he intended to take up.

Senator NELSON. You go on and make your statement, Mr. Maxim. Then the committee may want to ask you questions.

Mr. MAXIM. I presume that I was called to-day to say something about the proposition of a torpedo-proof ship.

Senator NELSON. Will you allow me to ask a few preliminary questions?

Mr. MAXIM. Yes.

Senator NELSON. What is your business at present?

Mr. MAXIM. I am an engineer and inventor.

Senator NELSON. Are you a shipbuilder?

Mr. MAXIM. No, sir.

Senator NELSON. Have you ever been?

Mr. MAXIM. I never built a ship; no, sir.

Senator NELSON. Are you a marine engineer?

Mr. MAXIM. No, sir.

Senator NELSON. What are you, then? Are you simply an inventor?

Mr. MAXIM. I am an inventor, chemist, engineer, literary man, expert boxer. [Laughter.] I used to be champion wrestler of Maine.

Senator NELSON. Well, go on with your statement.

Mr. MAXIM. I have had a good deal of experience in the manufacture and use of explosive materials, and perhaps it would be best

for me to say something about that in order to introduce this torpedo-proof ship, because it is an explosive engineer's job rather than a ship architect's job. I invented the multiperforated smokeless powder grain and the method of making it, which is the service smokeless powder of the United States to-day. That is one of the things I invented. I also invented the first high explosive to be successfully fired through heavy armor plate and exploded behind the plate.

Senator NELSON. Are you the inventor of what they call the "Maxim gun"?

Mr. MAXIM. No, sir; that was invented by my brother, Sir Hiram Maxim.

The secret of this Maximite, which is the name of the explosive I have just mentioned, was bought by the United States in 1901, after a number of tests. I also invented a fuse, which I sold to the Du Pont Powder Co., and the Du Pont Powder Co. sold that to the United States Navy for exploding high-explosive projectiles. So you will see I have had a little experience in the manufacture and handling of explosives. I built two powder mills at a place in New Jersey known as Lower Squankum, afterwards named Maxim, N. J. Now, I was led by my knowledge on the subject of explosives to the invention of this method of torpedo proofing ships that I have to lay before you. I submitted this method to Gen. Goethals——

Senator NELSON. Is your invention in the class they call torpedo-boat destroyers?

Mr. MAXIM. No, sir. I will explain it, if you will allow me. I submitted it afterwards to Admiral Capps, and since then all along the line to the Emergency Fleet Corporation and all the subsidiaries of the Shipping Board.

The principle on which my method of torpedo proofing ships is based is virtually that which was employed by my nephew in the Maxim silencer. The object is to put work on the gases of explosion as they enter the ship, thereby cooling them and lessening their explosive or disruptive and destructive effect upon the ship.

Senator NELSON. Let me see if I understand you. If a ship is torpedoed and the torpedo penetrates it, your plan is to take that torpedo when it gets inside and treat it so it will not make as great an explosion?

Mr. MAXIM. No, sir. The explosion takes place outside of the ship's hull, and the ship's hull offering less resistance than does the water the water acts as an anvil, or in explosive parlance as "tamping," and the gases are shot into the ship exactly as if they were shot from a gun. They go right through the wall of the ship and up through the ship's deck.

Now, then, as I have said, the object of this device of mine is to absorb the heat from those gases by interposing water or other heat-absorbing material in the path of the gases. It may be water merely, contained in cylinders, or any liquid. It may be a part of the cargo in certain instances, and it may be in the form of materials like apples, potatoes, and canned goods of all kinds. Anything rich in water can be employed as a heat-absorbing buffer cargo.

Senator NELSON. Please explain to the committee how that can be utilized on a merchant ship. What is the modus operandi?

Mr. MAXIM. So that there may be no misunderstanding, I will go back to your statement about the attacking effect of the torpedo. The torpedo strikes the wall of the ship and explodes against the outside wall of the ship under water. It explodes without the torpedo itself entering the ship. The gases of explosion are what enter the ship, and the velocity of the gases is substantially equal to the velocity of a meteorite, somewhere from 30 to 40 or 50 miles a second.

Now, before telling you exactly what I will do, I will show what the effect of the torpedo is upon a ship of present construction. When the torpedo strikes a ship of present construction the masses of iron and steel forming the hull of the ship are utilized as projectiles. These fragments are hurled into the ship through the inner compartments and bulkheads. In the case of the *Gulflight* they were thrown clear through the ship and out on the other side.

If you will let me proceed in my own way, I will tell you how I think of overcoming that difficulty. In the first place, I would build the hull of the ship, around the zone of danger of attack from torpedoes of as light construction as practicable, and put the heavier supports and beams in other places where they did not come exactly in the line of the explosive blast. That is, I take out of the direct line of the explosive blast all of the heavy masses possible, so as to minimize the fragment effect and the projectile effect of the fragments.

Then I interpose cylinders of water, in one instance, and then a steel screen, consisting of steel wires or rods running longitudinally of the ship, and also vertically, so that when the torpedo strikes the ship these cylinders of water, which are of fragile construction, containing as little weight and mass as practicable, are disrupted and the mass of water is hurled against the screen and atomized and the heat instantly absorbed by the water. That, in connection with the work done in the smashing effect upon the side of the ship and in bending and disrupting the screen itself, serves to disperse the energy of the gases, absorb the heat, and minimize the effect upon the ship's interior.

There are two ways of doing that, as I have said. One way is, in addition to the steel screen, to employ cylinders of water or other liquid. Another way is to utilize freight of different kinds rich in water, which may be placed in conjunction with this steel screen in such a way as to utilize the cargo itself to absorb the heat from the gases and put work upon the gases and thereby to minimize their effect upon the ship. That is, briefly, the system.

Now, I have thought of quite a number of ways of accomplishing this result—it is not all confined to one particular way—and I submitted the first design, as I said, to Gen. Goethals, and then submitted that design, with additional ones, to Admiral Capps, and they were finally referred to the Ship Protection Executive Committee. The Ship Protection Executive Committee gave me no word regarding them, and the first thing I learned of the action of that committee was through a letter received by me through the courtesy of Senator McCumber. In that letter that I received from Senator McCumber he inclosed a copy of the report that had been made by the Ship Protection Executive Committee to Admiral Capps, and that report was the subject of a letter at considerable length which I wrote to Senator McCumber. I will refer to some of the counts made by that

committee in that letter, so that you will see that not one of the counts made against my system by that committee is at all relevant. The entire report is irrelevant and untrue. It may be assumed to relate to a hypothetical system invented by the committee itself; it does not relate in any way to the system that I submitted.

Senator NELSON. Have you that letter here?

Mr. MAXIM. I have the letter here, and I will submit it as a part of my evidence; also an article in the Scientific American; also a series of prints illustrating my system in the various phases that have been submitted to the Ship Protection Executive Committee and the Fleet Corporation.

Senator JOHNSON. Mr. Maxim, won't you please explain the prints now, so that we may understand?

Mr. MAXIM. Yes. I would like first to go over these various counts, if you will permit me to do so.

Senator JOHNSON. Certainly; I did not want to interrupt your narrative.

Mr. MAXIM. One objection which they raised to my system was that it did not protect the external skin of the ship. As a matter of fact, that is one of the things which my system does do, and one of the things that I put forth as the most important things that a system of protection could do. My system serves to localize the damage and make it very much less extended in a lateral direction by allowing the gases free ingress to the ship, and then taking care of them after they enter the ship, and you do not get so much lateral destruction by the employment of my system.

Then another criticism was that my system required a free space of 15½ feet between the screen and the first wing bulkhead. That is not true at all.

Another objection was that the space so required for the expansion of the gases by my system was 50 per cent of the entire cargo space of the ship. That is not true at all.

Another one of the counts against my system was that a ship would have to be at least 58 feet beam, and that it could not be used on a ship of less than 10,000 tons. That is absolutely untrue. My system will apply to a ship of any size big enough to carry a cargo. It will apply to 4,000 and 5,000 ton ships as well as it will to a 10,000-ton ship. Of course, a 10,000-ton ship offers better protection than a smaller ship would, but the system applies to the one ship just as well as it does to the other.

Again, the objection was raised that my system would not work without the employment of a specific kind of cargo, consisting of apples and potatoes. I recited a long line of materials that could be used as well as apples and potatoes, but they confined it to a few things in an ironical and sarcastic way. There are very large amounts of materials sent abroad, such as molasses, oils, and other liquids, canned goods, potatoes, apples, and all kinds of fruits, that could be very well utilized as a buffer cargo to save a ship in case it is torpedoed.

Senator NELSON. Would not cotton bales be good?

Mr. MAXIM. They are good in a certain place, but in this system you want something that contains water, something that would be disrupted by the blast and absorb the heat from the gases.

Another objection to my system was that it required a specific kind of bulkheads. It does not require any specific kind of bulkheads, and I have shown that all through this series of presentations that I laid before the Shipping Board.

It is also stated against my system that if one of the wing bulkheads should be disrupted the ship would sink. That is not any more true of my system than of any other system.

Then, again, as I have said, they said that my means of protection would cost about 50 per cent of the cargo-carrying capacity of the ship. The maximum amount of encroachment upon the cargo-carrying space of the ship by the design that would encroach the most upon it of all the designs I have submitted would only be 11 per cent.

Now, I will explain these different methods, with your permission [exhibiting drawings]. The first is the one I submitted to Admiral Capps. In the hull of the ship there is a system of water cylinders, which you see here, placed in the usual structural walls of the ship without encroaching at all upon the cargo-carrying space of the ship. Here is the steel screen. You will see that the total mass of the steel screen is not more than a single bulkhead an inch thick, when seen in a single plane.

Here is another form of the hull. By putting in these strong struts here for the support of the ship the immediate hull of the ship, which constitutes the zone of attack or danger, is made very thin. By this form of construction, by putting into this space here [indicating] a heat-absorbing buffer cargo, this screen will receive the blast and the cargo will be atomized against it, and the residual gases will be vented upward through the hull of the ship. That is one of the forms.

Then I show here the different sizes of cylinders and forms of cylinders that might be used. The larger ones could be used for carrying oil or any other form of liquid.

There is one other feature I want to mention. One of the counts that was brought against my system was the fact that a test had been made of it. The reference to these tests was put in a way that would lead to the conclusion that the tests were not successful, instead of the fact that they were successful. In submitting these photographs I can not submit them in evidence, because they are very private. I do not know whether I have a right to show them to you here; I can not if they are to be printed. They have been conducting a certain line of experiments at the Bureau of Construction and Repair to determine the different means of resistance against torpedo attack, in order to find that which would be the most efficient. I have here a series of photographs showing the results of the tests.

Senator NELSON. Let me ask you right there, Mr. Maxim, will these torpedoes explode before they strike a hard surface?

Mr. MAXIM. No; they must strike something to explode.

Senator NELSON. They must strike a hard surface to explode? They are not timed?

Mr. MAXIM. No; they go off on impact. But they explode very quickly.

Senator NELSON. Have you figured out how much resistance is necessary to bring about an explosion?

Mr. MAXIM. It is very small.

Senator NELSON. Suppose instead of a wall of wood you had a big heavy cotton quilt hanging there. Would it explode if it hit that?

Mr. MAXIM. It would explode.

Senator NELSON. By impact on a heavy cotton quilt?

Mr. MAXIM. I should say it would go off if it struck on a cotton quilt. The striking energy of a 21-inch torpedo is about 78 foot-tons. It travels about 30 or 40 knots an hour. It has a firing mechanism, a trigger or firing pin, which is actuated by impact upon an object offering a sufficient amount of resistance, and that explosion takes place so quickly it is just the same as if the torpedo was standing still, because the explosion is practically instantaneous.

Senator NELSON. That object of impact that brings about the explosion, may that be either a hard or a soft object?

Mr. MAXIM. Well, if it is a continuous object—that is, an object like a screen—so that the firing pin would go through it without hitting it, then your torpedo would go through—they have cutters on the torpedo so it will cut its way through—until it does strike something hard. But I do not think of any conditions under which a torpedo striking a ship would not bump against something hard. It seems to me it is a necessary thing that the wall of a ship should be sufficiently resistant to fire a torpedo.

Senator NELSON. Suppose it struck a bin of apples or potatoes with nothing between?

Mr. MAXIM. There would be resistance enough there; oh, yes.

You will notice in all these [indicating photographs] that bulkhead No. 1 is completely destroyed, and in some of them bulkheads No. 2 and No. 3.

Senator NELSON. Have you a picture there showing the apparatus as it will be when it is attached to the vessel?

Mr. MAXIM. These prints show it.

Senator NELSON. Have you anything here that shows what the apparatus is that you attach to the vessel?

Mr. MAXIM. Yes; it is all illustrated in these prints. This apparatus that was made by the Bureau of Construction and Repair, of which I am showing you the photograph now, was merely a caisson submerged under water, one-sixteenth normal size, to give an approximate idea of the effect of an explosive blast—that is, the relative effect of an equivalent quantity of explosive, which was three-tenths of a pound—on different forms of apparatus.

Here [indicating photographs] are the different kinds of apparatus that were tested. It will not be necessary for me to go into all these, except to show you that No. 1 bulkhead in every one of them is broken through, with the exception of the bulkhead in my apparatus. That is my apparatus [indicating], and you will see that is not broken through at all. A bolt flew out of bulkhead No. 1 and was thrown through No. 2, but the bolt did not form any part of my design.

I will tell you that the quantity of high explosive which we call T. N. T. in the war head of a 21-inch torpedo—about 400 pounds, I think, is the charge generally employed—weighs about 100 pounds to the cubic foot. So there is about 4 cubic feet of that, and 1 cubic foot of that makes 1,000 cubic feet of gases after it has expanded down to atmospheric pressure. But it is heated to about 5,000° F.

at the instant of explosion, and as it expands diabatically it is the same as though it was expanding from a pressure to which it had been pumped up; so that the temperature, except for the work it does in displacing the air or disrupting objects, is the same after it has expanded. So we have 40,000 cubic feet of gases at a temperature of 5,000° F., less, as I have said, the amount of work which they do in the act of expanding.

Senator McCumber. If I may have the privilege, Mr. Chairman, I would like to ask Mr. Maxim if he will explain, by the use of the diagrams which he presented, how the gases will be absorbed and through what vents they will escape.

Mr. Maxim (exhibiting a drawing). This is perhaps as good a design to show that as any. This is the one that was published in the Scientific American under date of July 9. This is a vertical sectional view, and these are the water cylinders in the wall of the ship. This is the screen. Now, when a torpedo strikes the wall of a ship, as here, for example——

The Chairman. The screen is made of what?

Mr. Maxim. Of steel rods or wires, preferably from one-half to three-fourths of an inch. They will have a tensile strength of about 150,000 pounds to the square inch of cross section.

The Chairman. What is the mesh?

Mr. Maxim. They will be placed, as you see here, about two diameters apart.

Now, then, when the blast of explosive strikes the ship like that, it expands into the ship in the form of an inverted cone, and if you impede those gases and absorb the heat from them by the interposition of these water cylinders and this barrier, the gases are turned upward through the vents, up through the deck, and do not pass into the interior portion of the ship at all.

Here is one of the later of the different forms I have submitted. This is a vertical cross section of the portion of the ship which provides my means of protection. You will see that the outside wall of the ship is made comparatively light. Then here are the water cylinders or cylinders containing liquid. Then here is the screen or barrier. Then the first bulkhead of the ship, which we might call a "wing bulkhead," is a composite bulkhead which constitutes a species of screen, so that any cargo placed in here may be utilized just the same as the cylinders. You have plenty of that kind of cargo, and with a ship built in that way you can place that cargo in here instead of putting the water in the outside cylinders. You may have your heat-absorbing material in the form of cargo in your outward trip and fill your cylinders with water on your return trip, so that you do not have to sacrifice any weight in order to protect your ships by means of a heat-absorbing material.

The Chairman. Would that add a great deal to the cost of a ship?

Mr. Maxim. No, sir: it would not.

Senator Fernald. About what per cent, Mr. Maxim?

Mr. Maxim. I am not much of an authority. I do not know a great deal about ship construction; I do know something about explosives.

I would like to say two or three words about my later conclusions regarding this method of ship protection. I have been devoting

myself a good deal lately to the investigation of the concrete ship, and I have found this out, that there is a means of "shooting" the concrete by gas pressure or steam or heated air. There is a man by the name of Harold P. Brown, 120 Liberty Street, New York, an expert, who is doing that sort of thing. The concrete blown in that way is so dense and hard that it will take a polish resembling marble; and it is very tough, very dense, and absolutely impervious to water. He is not the only man that has been using that method, but he is very successful and I learned from him the advantages of that method.

I have learned also that concrete offers very great advantages as a resisting medium to an explosive blast, and if the hull of a ship be made of concrete the concrete itself serves to absorb a large amount of the heat of the products of combustion of the explosive blast, because the explosive blast pulverizes the concrete and does work in doing that, and then these fine particles have to be heated by the blast and take up heat from the blast. Not only that, but the concrete ship does not carry the vibrations through itself like a steel ship does. You know you can strike on the end of a steel rod and break off the far end of it. You know, also, a sharp, quick blow on a piece of sheet metal will break rivets the whole length of it sometimes. With concrete that can not occur. The effect produced upon concrete by an explosive blast or hammering or anything of that sort is very local in its action. Consequently, the hull of a ship made of concrete would resist an explosive blast with great efficiency; not only that, but the blast would be greatly localized and there would be very little lateral action upon the ship.

The CHAIRMAN. But there would be a hole big enough there for water to enter the ship?

Mr. MAXIM. There would not be as big a hole or anything like as big a hole as there would be in a steel ship. Not only that, but you minimize the fragmentation; you do not get any large fragments. The concrete is practically pulverized by the blast.

On my way down yesterday I went to my draftsman and had him make a little sketch that I might show you. This is very immature, but it will give you an idea of how a heat-absorbing buffer cargo can be utilized to great advantage in a concrete ship and the concrete ship itself utilized to absorb the heat [exhibiting drawing]. We will make this wall here—I think 4 inches would be thick enough. They usually make them about 6, but I think 4 inches would be enough. This is a cross section cut right down through the side of the ship. Here is a series of wires running lengthwise and forming shelves. The concrete extends up these shelves 6 inches, so that there is a flange there that very materially strengthens the wall of your ship.

Here is another view of it, so you can see exactly how it is done. Taking a section of the ship 24 feet long, there would be three different 8-foot lengths. These shelves would be 8 feet long and there would be a partition of concrete 3 or 4 inches thick. I think that would be a particular advantage, because you see that concrete will serve to hold these rods from yielding under the impact of the blast, and those rods form both the shelves and the screen.

Now, then, we can fill this whole space in here with apples, potatoes, canned goods, or any kind of heat-absorbing material. We

have not sacrificed a particle of our cargo space or added weight to the ship. Even if you do not build the whole ship of concrete, the zone of danger around the ship should, in my opinion, be built of concrete, like that [indicating], and let the rest of the ship be built in its usual way. Take these ships that they are building now by the method employed in making Ford cars; they could be protected in this manner by putting a concrete belt around them. That is only my opinion; I am not a ship architect.

I want to say two or three words, if I may, on the subject of the plan that is being followed of building ships faster than they can be sunk. At this time we are all allowancing ourselves with our food, etc., and feeding the sea with it instead of getting it over to the other side. They are sinking ships at the rate of $6,000 a minute. The value of cargo ships being sunk is $6,000 a minute, and that is going some. But it is not the value of the cargo so much as it is the needs of our troops and of our allies on the other side. Instead of $6,000 it may be worth $6,000,000. And it seems to me, even if it should cost a little extra or encroach upon the cargo space of a ship, if we can get our ships across the sea without their being sunk or without any danger of their being sunk, we can very well afford to do it. And we can absolutely do it, as sure as the gospel, if we proceed in the right way. You can not have an omelet without breaking a few eggs, and it is my opinion that by breaking a few eggs, by the sacrifice of a little expense and weight, we can, without any question at all, make ships that will be absolutely torpedo proof, that you could not sink with half a dozen torpedoes.

The CHAIRMAN. No matter how close you got to them?

Mr. MAXIM. It would not make any difference at all. I am not alone in this belief that the concrete ship can be made a success. I had a talk with Mr. Edison the other day and spent an evening with him. We talked about this, among other things, and I do not think it is any breach of confidence to say that Mr. Edison is strongly of the opinion that the concrete ship offers remarkable opportunities. It is a thing, I think, that very energetic attention should be given to at this time. The plan that we are following now is that which is followed by the rabbit and certain kinds of polypi; they survive on the plan of breeding faster than they can be devoured. I do not think that is the way we ought to proceed in this matter of ships. I think we should protect our ships, and there are only two ways we can do it. We have either got to stop the submarines from coming out or we must build torpedo-proof ships.

I would like to make this statement: That it is my opinion that in a world war like we are engaged in now, the word "noncombatant" is without meaning, and "neutral nation" is a phrase without meaning. We are fighting the fight of every nation in the world, and every nation that is not with us in this fight is a slacker. They should be either our friends or our enemies, and there should not be any neutral nations. If that were done, we could very easily put a barrier across to the coast of Sweden and keep the submarines in. It could be done for a couple of hundred million dollars.

Senator NELSON. But don't they have submarine bases in Belgium?

Mr. MAXIM. They can be cut off at the straits; they have them cut off pretty well now.

Senator NELSON. They have a submarine base at Zeebrugge and at another place.

Mr. MAXIM. Yes; but they can cut them off so that they can not get out into the big Atlantic. Out there is where they are doing the most damage.

Senator McCUMBER. Mr. Chairman, If I may be permitted to make the remark, I think that from some of the questions and suggestions it might be assumed that Mr. Maxim had something that he wanted to sell to the Government. I want to say this is not the case. He is not seeking to foist any patent or to ask for anything, but simply to get the Government to adopt some measure, if possible, to make a torpedo-proof ship, without any remuneration whatever.

Mr. MAXIM. I wrote Admiral Capps twice offering the Government the absolutely free use of both my inventions during the war and my own services during the war, free of all cost to the Government.

The CHAIRMAN. We had that impression. What would it cost to make this experiment?

Mr. MAXIM. I think you could make a caisson to test this thing for $50,000. And since I have been talking to you here there has been enough allied shipping lost to build four of them.

The CHAIRMAN. I understand, Mr. Maxim, you have not made actual tests of this matter of the screen?

Mr. MAXIM. That screen was tested as shown in those photographs that I showed you, which were twice as good as anything they tried along that same line.

Senator NELSON. But would not the only safe test be to load a vessel with merchandise and take it out, loaded, as you suggest, with potatoes and apples on the side——

Mr. MAXIM. And then shoot at it.

Senator NELSON. And then get a real torpedo boat to fire at it?

Mr. MAXIM. That would be the best thing to do; that is what ought to be done.

Senator NELSON. Yes.

Mr. MAXIM. As sure as you live, that is exactly the best thing to be done. And what ought to be done is this: Get some of the best concrete men, some of the best ship architects, to sit down with me and agree upon a plan to build an apparatus or means for protecting the ship along these lines. Some of these architects, I have found, know a little more than I do about some things, and I know some things they don't know.

But this is a war not of ship architects. This is a war not of any particular experts. It is a war of the amateur; it is a war of the engineer; it is an engineering, scientific, and industrial proposition. No man has a right to pause now and hold up the other fellow simply because he is an expert in some particular line.

Senator McCUMBER. I should like to have Mr. Maxim explain one thing that I do not think he explained in detail. I wish you would explain to the committee the purposes of those cylinders and what effect the explosive would have on them.

Mr. MAXIM. I thank you for the opportunity of explaining that. Here [exhibiting a drawing] is one of the forms which I think is best for the concrete ship. This is looking down on the top, you see, in plan view. Here is our screen, built in this way——

Senator NELSON. That is on the outside of the ship?

Mr. MAXIM. On the inside. Everything is on the inside of the ship. You would not see anything on the outside of the ship at all.

Senator NELSON. That and the water cylinders are all on the inside?

Mr. MAXIM. Everything is on the inside; nothing on the outside. There is one thing I want to call your attention to, that in this form of construction this line [indicating] would be taken out, and these lines would be repeated the same as they are in that shelf construction that I showed you in that concrete ship, so that you would get this deflection upward.

Senator NELSON. I have one difficulty, and it is this: You say that these water cylinders and these screens are on the inside of the ship. It may be my ignorance, but it seems to me that those things can not operate on the torpedo until it gets inside, until it gets through the wall of the ship.

Mr. MAXIM. Not the torpedo; the blast breaks in.

The CHAIRMAN. It is already exploded.

Mr. MAXIM. Yes; it blows a hole through the ship, and then it strikes these. If you put 18 inches of steel on the outside of your ship it would not protect it; it would blow a hole right through it.

The CHAIRMAN. You are trying to destroy the effect after the explosion?

Mr. MAXIM. Yes; you can not do it all at once; you have to "tease" it down. In other words, use the tactics of Fabius Maximus when he fought Hannibal; don't try to stop him but wear him out.

Now, here is the wall of the ship. Those cylinders we fill with water on the return trip. Inside here [indicating] we put preferably the kinds of cargo that we can get that would absorb heat. If we are short of that kind of cargo then we can fill these large cylinders with water.

Senator NELSON. You can put in also potatoes and apples and that kind of stuff, instead of putting water in the bottles?

Mr. MAXIM. Yes; and if you have not got enough of that you can fill the bottles with water. Then on the return trip, if you have not got the cargo you can fill the water bottles and they will give you ballast and protect the ship as well. These small ones you can fill when you have not got quite cargo enough, and here is your elastic medium; I mean to say, that gives you a chance to come and go. You can use some cargo, and then you fill these small ones with water. They alone would suffice, even without the cargo.

Senator NELSON. Then your theory, as I understand it, is that these water bottles, in case you have them, may be filled with potatoes and apples?

Mr. MAXIM. You do not need them, however.

Senator NELSON. But in one case or the other either one of them will stop the effect and minimize the effect of the explosion?

Mr. MAXIM. Absolutely.

Senator NELSON. There may be water bottles or apples and potatoes, and it will have exactly the same effect?

Mr. MAXIM. It will.

Senator MCCUMBER. He means the cylinders containing water.

Mr. MAXIM. That is what he means.

Senator MCCUMBER. That is not what he said.

Senator NELSON. I mean cylinders.

Mr. MAXIM. They sometimes refer to carbonic acid gas steel containers as "bottles."

Senator NELSON. I mean exactly what you said, water cylinders.

The CHAIRMAN. Are they steel?

Mr. MAXIM. They are thin steel cylinders.

The CHAIRMAN. What size?

Mr. MAXIM. These small ones are a foot and these big ones 2 feet.

The CHAIRMAN. They are filled with water?

Mr. MAXIM. They are filled with water; yes, sir.

The CHAIRMAN. And they extend up from the hold of the ship to the main deck?

Mr. MAXIM. From the main deck down to the bottom of the ship.

Senator NELSON. But for that water in the cylinders to have effect, must not the cylinders be broken?

Mr. MAXIM. It breaks them all to pieces at the point of contact; it breaks them up and throws this water against the screen.

Senator SHERMAN. Your problem is to minimize the destructive effect of the gases?

Mr. MAXIM. Exactly. Here is the idea of the cylinders [illustrating with drawing]. Here [indicating] is the water line in this plate 7, and these only extend from there up to below the water line. The torpedo travels about 15 feet below the water, and it has to travel at that depth in order to travel true. It can not travel any higher or nearer the surface; if it does it will shoot right up out of the water.

Senator MCCUMBER. This water converted into spray and mist is an absorbent of the heat of the gas?

Mr. MAXIM. Yes.

Senator MCCUMBER. And thereby, in conjunction with the vents, tends to neutralize the effect of the explosion?

Mr. MAXIM. Exactly, true; and it is very efficient. There is nothing in the world that has such an affinity for heat or can contain so much heat per pound as water. Water has the highest specific heat of any substance in the world. It takes as much heat to evaporate 1 pound of water as it does to melt 5 pounds of cast iron. Now, then, the speed; that is to say, the rate at which the heat is given out to water in the presence of the gases or the products of combustion, is directly as the amount of surface presented and as the fifth power of the difference in temperature. It is, for all practical purposes, instantaneous.

The CHAIRMAN. Are there any other questions? If not, then that is all, Mr. Maxim, and we are very much obliged to you, sir, for coming down. The committee will now go into executive session.

(Thereupon, at 4.27 o'clock p. m., the committee proceeded to the consideration of executive business, and at 5 o'clock p. m. adjourned to meet to-morrow, Thursday, January 17, 1918, at 2 o'clock p. m.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

THURSDAY, JANUARY 17, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, Sheppard, Martin, Nelson, Jones, Sherman, Harding, Fernald, Calder, and Johnson.

The CHAIRMAN. We will now hear Mr. Browne. Senator Jones, I believe you wanted to ask Mr. Browne some questions.

STATEMENT OF MR. FRANK A. BROWNE, GENERAL PURCHASING OFFICER UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—Resumed.

Senator JONES. Mr. Browne, I want to ask you something about the method of securing supplies or machinery for your ships. For instance, in securing lifeboats to be used on these ships, what method do you take to get them constructed?

Mr. BROWNE. Would you like a description of the general method of making purchases?

Senator JONES. Yes; I would.

Mr. BROWNE. The purchasing division obtains its information in regard to what is to be purchased and the quality of the article from our engineering department. It comes to us in the form of specifications, or perhaps merely a statement of the article wanted. Either the engineering department or the purchasing division writes up specifications, and these specifications are, as a rule, mimeographed so that they can be sent out broadcast. After the specifications are prepared we send out a circular letter to a selected list of companies known to manufacture this particular article, or who could, by perhaps a slight change of factory equipment, manufacture the article. Those lists of manufacturers are made up from the best sources of information that we have. We use, for instance, commercial registers like Hendrix or Thomas, and those registers are supposed to contain the names of all parties or companies making all kinds of articles. They are supposed to cover the entire industry of the United States. We supplement those lists with the names of people who have applied to us requesting that their names be put on the list, as well as by the knowledge of various persons in the purchasing division as to who can manufacture the article we want.

We send the inquiry out broadcast, and in some cases to as many as 100 people. It is mailed——

Senator JONES. Do you ever call for bids in the way that bids are ordinarily called for?

Mr. BROWNE. We do not set a definite date for the opening of the bids. We ask for a price to be submitted within a short period, possibly 10 days.

Senator JONES. Is that the ordinary time that you give within which these prices are to be submitted?

Mr. BROWNE. Except in the case of large apparatus, like marine engines or boilers, where the cost could not be computed in a short time.

Senator JONES. Does that 10 days apply from the date of your order, or is it 10 days from the time it is received by the parties?

Mr. BROWNE. Ten days from the date of the letter.

Senator JONES. Then how do you expect to get any proposals from the Pacific coast in such a time as that?

Mr. BROWNE. We state that bids may be submitted by telegraph or any other means.

Senator JONES. Yes, but is not the submission of a bid by telegraph rather an unsatisfactory way of submitting a bid, especially upon anything of a complicated character?

Mr. BROWNE. As a rule, I think enough information can be submitted in a telegram so that we will have a basis for making an award.

Senator JONES. Have you ever considered the desirability and justice of giving a little more time to people on the Pacific coast for preparing their bids? Do you realize that very frequently it takes the mail even seven or eight days to get to the Pacific coast?

Mr. BROWNE. We have taken that into consideration, and before closing it is customary for us to send a telegram to all the people who have not sent in bids, stating that we are about to close, giving them an opportunity to state that possibly they want two or three days longer, or that they do not intend to bid or submit a price.

Senator JONES. Did you ever think that if a firm gets a notice that it should send in its bid within 10 days from the date of mailing of your letter and only two or three days are left, they might simply pass it up?

Mr. BROWNE. I had not thought that their action would be affected in that manner.

Senator JONES. Do you not think it is very likely that would be the case?

Mr. BROWNE. It might be possible.

Senator JONES. I would like to ask about some particular matters. Have you had any bids or calls for bids or proposals with reference to lifeboats?

Mr. BROWNE. Yes, sir.

Senator JONES. When?

Mr. BROWNE. I think we had some quite recently; I do not remember the details of it.

Senator JONES. Have you your letter calling for bids with reference to lifeboats?

Mr. BROWNE. I have not a copy of that here.

Senator JONES. Can you get a copy of it and furnish it?

Mr. BROWNE. Yes, sir.

Senator JONES. That, I suppose, was the ordinary form of letter, specifying that bids and proposals should be received within about 10 days from its date, was it?

Mr. BROWNE. I am not sure.

Senator JONES. Have you let a contract for these lifeboats?

Mr. BROWNE. I do not know.

Senator JONES. Who in your office will know?

Mr. BROWNE. I can easily find out by investigating. This is only one of a large number of articles that we purchased, and it is impossible for me to keep in touch with every article.

Senator JONES. Do you know—of course, if you do not know whether the contract has been let, you would not know to whom it had been let. You have not given any more time for bidders on the Pacific coast to submit proposals than you have to people in the East or close by?

Mr. BROWNE. No, sir.

Senator JONES. You have made it uniform?

Mr. BROWNE. Yes, sir.

Senator JONES. I think, Mr. Chairman, I do not care to ask Mr. Browne anything further about this until he brings up the form of letter that they usually send out, and I should like especially to have it with reference to lifeboats and other supplies to be furnished for the equipment of these ships. When he brings those and is prepared to give information along those lines, I can ask him some questions along the line that I want to know about.

What I want to bring out and show is the disadvantage to which people on the Pacific coast are put in regard to many of these matters, and also the advisability, from my standpoint, of the Government giving them more time, especially for things that can be purchased on the Pacific coast, and see whether or not they take into account the difference in cost of freight, transportation, etc. That is the general line, Mr. Browne, that I wanted to ask you about.

Mr. BROWNE. I might state for your information that I recall two contracts for lifeboats which have been awarded on the Pacific coast. We have awarded several contracts for marine engines, several contracts for boilers, and contracts for other things, and I have never received any complaint as to the sort of treatment which the people on the Pacific coast get in the award of contracts.

Senator JONES. I wish that you would get the information that I have indicated, and then I will ask you further with reference to it.

Mr. BROWNE. I shall be very glad to do so.

The CHAIRMAN. Do they manufacture lifeboats on the Pacific coast, do you know?

Mr. BROWNE. Yes, sir.

Senator JONES. We can supply all the lifeboats you want on the Pacific coast.

The CHAIRMAN. Those are steel?

Senator JONES. Iron.

Mr. BROWNE. Steel and wood.

The CHAIRMAN. You are using both steel and wood?

Mr. BROWNE. We are not using wooden lifeboats to any large extent. We are using wooden work boats. We have a contract on the Pacific coast for wooden work boats, and, as I say, we have, I

am quite sure, two contracts for steel lifeboats on the Pacific coast. Our policy is to take into consideration when awarding contracts on the Pacific coast the difference in freight between the materials shipped from the Atlantic coast and material which is on the Pacific coast. For some large pieces of machinery, like marine engines, the difference in freight may amount to $1,500 per engine, and in considering the awards we take that into consideration. For instance, if the prices were exactly the same, the Pacific coast bid would be low, because the difference in freight would be $1,500. We always take those things into consideration.

The CHAIRMAN. I presume it would be a matter of good business judgment to have life boats that are to be put into vessels on the Pacific coast manufactured over there, if it can be done?

Mr. BROWNE. We have attempted to do that in all cases. We have attempted to place bids for machinery for ships to be constructed on the Pacific coast, on the Pacific coast, as an aid to transportation and in order to distribute this business as equitably as possible to various parts of the country. That has been carefully considered.

(The hearing was suspended at this point for 10 minutes, to permit the members of the committee to respond to a call of the Senate.)

The CHAIRMAN. Capt. Wescott, we will hear you now. We want to ask you something about officers for the merchant marine.

STATEMENT OF CAPT. WILLIAM A. WESCOTT, PRESIDENT AND BUSINESS MANAGER OF THE MASTERS, MATES, AND PILOTS' ASSOCIATION OF THE PACIFIC.

The CHAIRMAN. Please state your name in full.

Mr. WESCOTT. William A. Wescott.

The CHAIRMAN. Your business and occupation?

Mr. WESCOTT. President and business manager of the Masters, Mates, and Pilots' Association of the Pacific.

The CHAIRMAN. Captain, will you state what are the officers required for each merchant vessel.

Mr. WESCOTT. The number?

The CHAIRMAN. No; name them, and give the duties of each.

Mr. WESCOTT. The master, who has command of the vessel; the chief mate, who looks after the upkeep of the vessel and cargo—also most of them stand a bridge watch; the second mate, who is a watch officer, and on a large liner is the navigating officer; and the third mate, who is also a watch officer.

Senator NELSON. Is the navigating officer a distinct officer from the others?

Mr. WESCOTT. No; the second officer is the navigating officer, and they always call him the navigating officer. The captain also navigates the vessel, so that they check up against one another. That is done so that if there is any error they will have a check on one another. He is designated really as the navigating officer on large liners only.

The CHAIRMAN. You have not gone through the entire list of officers?

Mr. WESCOTT. That is the entire list of deck officers.

The CHAIRMAN. Are there any others on a vessel entitled to be designated as officers?

Mr. WESCOTT. Well, they designate the steward as an officer——

Senator NELSON. And those in the engine room?

Mr. WESCOTT. In the engine room the chief engineer has charge of the engines—absolute control of the engines.

The CHAIRMAN. I wish you would give them all right on down.

Mr. WESCOTT. The first assistant engineer, who is really the working engineer, looking after everything, under the supervision of the chief engineer; the second assistant engineer, who as a rule has charge of the boilers. The first assistant looks after the engine room and the engines when in port. When at sea they all of them stand their regular sea watches, excepting the chief engineer, and on some small vessels the chief engineer stands a watch, where they only carry three engineers. On vessels where they carry four engineers the chief does not stand a watch as a rule.

Senator NELSON. What is a watch?

Mr. WESCOTT. Four hours on and eight hours off.

The CHAIRMAN. Actually on duty?

Mr. WESCOTT. Actually on duty. In the deck department, where they carry three mates and they are on runs of 400 miles or more, they have three watches. If they are on runs of less than 400 miles, they can be divided into two watches. That is according to the Hardy officering and manning act approved March 3, 1913.

Senator NELSON. That means, then, barring the exception you made, that they are actually on active duty 4 hours out of every 12?

Mr. WESCOTT. Four hours out of every 12.

Senator NELSON. Or 8 hours out of every 24?

Mr. WESCOTT. Eight hours out of every 24. This is the way the law reads, Senator: On vessels of 1,000 gross tons or more, on runs of 400 miles or over, there shall be three mates, and they shall stand in three watches while such vessels are being navigated; but if such vessels are running less than 400 miles, then it is only necessary for them to be divided into two watches; and if the vessel is under 1,000 tons gross, it is not necessary to have more than two mates, regardless of the distance, unless three are designated by the local inspector. That is on account of the earning capacity of the vessel.

Senator NELSON. In that case the master must stand a watch?

Mr. WESCOTT. No; he does not stand any watch.

Senator NELSON. If there are only two mates——

Mr. WESCOTT. There are only two watches.

Senator NELSON. What is their length, then—six hours?

Mr. WESCOTT. Six hours; that is to say, four 3-hour watches and two 6-hour watches, dividing the 24 hours so as to change the watches at mealtimes. Of course that is a hardship on them, but still there are not many vessels of that size that run more than 400 miles.

Senator HARDING. The captain always goes on in an emergency, does he not?

Mr. WESCOTT. The captain is always on duty.

Senator NELSON. He may stand a watch of 30 hours?

Mr. WESCOTT. Whenever it is foggy weather, storming, or when passing any prominent point or sighting any lights, the master must always be in such a position that he can go on watch, and, if necessary, stay there for 24 or 36 hours if the occasion arises.

The CHAIRMAN. What other officers are there?

Mr. WESCOTT. The officers on watch, Senator.

The CHAIRMAN. The officers do not include stewards and cooks?

Mr. WESCOTT. They call the stewards officers, but they are not officers in the true sense. We call the purser an officer. He is the representative of the ship as far as money matters are concerned, he looks after the accounts, but he is not designated by law as an officer. The licensed men are designated by law as officers.

The CHAIRMAN. That is what I wanted to get at. Now, Captain, you are familiar with the situation as to the supply of officers generally throughout the country?

Mr. WESCOTT. Deck officers; yes, sir.

The CHAIRMAN. What have you to say about our ability to supply the officers that will be required for manning the merchant fleet?

Mr. WESCOTT. I want to say, Senator, that there will be no trouble in supplying the officers. I do not believe there will be any difficulty in supplying the seamen, but I do believe there would have been trouble in supplying the officers if it had not been for the enactment of the Hardy Officering and Manning Act, which you for one, Senator Nelson, and other Senators here, were very active in getting through. I also believe there would have been trouble in obtaining the proper number of seamen if it had not been for the passage of the seamen's bill, so that the young men of this country know that they will come somewhere near having reasonable working conditions.

Senator NELSON. Speaking about the deck officers on the ship, of course, they are licensed officers and can not act until they get licenses, but what is the preliminary education required of them, and how do they get it?

Mr. WESCOTT. Through sea service.

Senator NELSON. Is that all? Do they not have to go to navigation schools?

Mr. WESCOTT. I was just going to mention that. They must also understand navigation——

Senator NELSON. Do they not go to navigation schools?

Mr. WESCOTT. Most of them have to attend navigation schools; yes, Senator.

Senator NELSON. Is there not a distinction between Lake officers and those officers on the deep sea as to their qualifications?

Mr. WESCOTT. Oh, yes.

Senator NELSON. That is, officers on salt water, on the deep sea, must understand the principles of navigation?

Mr. WESCOTT. Yes, sir.

Senator NELSON. And be able to take the latitude and longitude of the vessel?

Mr. WESCOTT. Yes, sir; by observation, and find the ship's position by dead reckoning.

Senator NELSON. That is not required on the Great Lakes.

Mr. WESCOTT. That is not required on the Great Lakes.

Senator NELSON. Because there they are nearly always in sight of land.

Mr. WESCOTT. They are nearly always in sight of land, and all of the officers on the Lakes hold pilots' licenses.

Senator NELSON. So, on the Great Lakes all that is necessary is for a man to be a sailor——

Mr. WESCOTT. And have local knowledge.

Senator NELSON. And have local knowledge, and he will graduate into an officer—into a master or mate?

Mr. WESCOTT. That is correct.

Senator NELSON. But on the deep sea he must understand the principles of navigation?

Mr. WESCOTT. He must have the experience and understand the principles of navigation.

Senator NELSON. The fact that he is an able seaman is not enough?

Mr. WESCOTT. No, sir; he must also understand navigation; and I want to say right here that I believe that on the Pacific coast they turn out the best navigators in the United States.

Senaor NELSON. Have they navigation schools out there?

Mr. WESCOTT. Oh, yes. That is for the reason that the inspectors on the Pacific coast are far more strict than they are in any other part of the United States.

Senator NELSON. Are those navigation schools public or private?

Mr. WESCOTT. They are both public and private. San Francisco for several years has had a public navigation school. They have had one or two private navigation schools.

Senator NELSON. When I speak of "public" navigation schools I mean schools that are free, like a public school.

Mr. WESCOTT. Yes, sir. Many of the men prefer to go to the private schools—there is a private school in Seattle and one in San Francisco—because the man that keeps the private school in San Francisco is a practical man himself, has been both master and mate, and he is very careful that no man goes up for a license unless he is sure that the man is able to pass the examination.

Senator NELSON. What is that examination? Is it written or oral?

Mr. WESCOTT. It is written.

Senator NELSON. Altogether?

Mr. WESCOTT. It is written, except in regard to the rules of the road—placing models, you know, and asking them what they would do if a ship was in various positions.

The CHAIRMAN. What is the length of the term?

Mr. WESCOTT. Some men take longer than others; it is a great deal according to the man's education. On the average, for a man to go up for a second mate's license it takes about two months. Some will make it in seven weeks, and some require three months.

Senator NELSON. It will depend somewhat on the preliminary knowledge they have of mathematics?

Mr. WESCOTT. Certainly.

Senator NELSON. A knowledge of the principles of algebra, geometry, and trigonometry?

Mr. WESCOTT. Certainly.

Senator NELSON. Do they take them out on trial trips?

Mr. WESCOTT. Oh, no. They are men that have already had the experience.

Senator NELSON. You do not grant a license to a captain until he has served as mate?

Mr. WESCOTT. No, sir; he has to serve as mate first.

Senator NELSON. How long is he required to serve as mate?

Mr. WESCOTT. Well, he can serve one year as chief mate, and that entitles him to go up for a master's certificate. If he serves two years

as second mate while holding a chief mate's license he can go up for a master's certificate.

The CHAIRMAN. Does he have to stand an examination then?

Mr. WESCOTT. Oh, yes.

The CHAIRMAN. Before what board?

Mr. WESCOTT. Before the United States local inspectors. If a man has only had a third mate's service, and if he has been in charge of a bridge watch for the period of three years while holding a chief mate's license, he can go up for a master's license.

Senator NELSON. But otherwise, unless you have what you call a chief mate's license, you have to work up gradually?

Mr. WESCOTT. You have to work up gradually.

Senator NELSON. That is, a third mate must step up to second mate, and from second to first?

Mr. WESCOTT. And next from chief to master. The reason that rule was made was because on account of the fact that the owners of many of the liners insisted that the second mates should have a master's license.

Senator NELSON. As I understand it, under the law, all the officers, including deck officers and the engine-room officers, must be citizens of the United States?

Mr. WESCOTT. Senator, God knows I wish such was the case.

Senator NELSON. Is not that the law?

Mr. WESCOTT. That was the law, Senator, and I hope I may have the opportunity to say something on that subject to the committee in executive session, because there are many things I would like to say outside of this hearing.

Senator JONES. Why would you want an executive session? Would it deal with international matters?

Mr. WESCOTT. It would deal with certain things, Senator, that I do not believe this is a very opportune time to make public.

Senator JONES. From what standpoint?

Mr. WESCOTT. Well, pertaining to orders which caused that to be brought about—the law, etc.

Senator JONES. Orders issued by our administration?

Mr. WESCOTT. Certainly.

Senator JONES. It does not affect foreign relations?

Mr. WESCOTT. No, sir.

Senator JONES. I do not see any reason why that should be executive.

Mr. WESCOTT. Senator, I feel that I could talk more freely.

Senator JONES. The mere fact that you think a thing should be kept a secret is no reason why it should be executive, in my judgment.

Mr. WESCOTT. Well, Senator, after the Senators hear it, then the Senators are the ones who are at liberty to say whether it should be made public.

Senator NELSON. State what is the exception to the law now, how it was brought about, and by what act?

Mr. WESCOTT. The act which was approved August 18, 1914, which provided that foreign-built vessels could be admitted to American registry.

Senator NELSON. Before you proceed with that let me ask you this: Before that time the law required all of them to be citizens, did it not?

Mr. WESCOTT. Yes, Senator. In 1792 the Congress of this country enacted a law that no vessel flying the American flag should depart from a port of the United States unless the officers were citizens thereof under the penalty of 50 cents a ton. In 1813 they extended the law to include the crew as well as the officers. In 1832 they modified it so that the officers and only one-half of the crew were required to be citizens. In 1864 that law was replaced the same as it was enacted in 1792, which provided that only the officers were required to be citizens. It remained that way until the 4th day of September, 1914, when the President, under the act of August 18, 1914, suspended the citizenship law for officers for a period of seven years on all foreign-built vessels admitted to American registry under that act.

Senator NELSON. Right there, were there many vessels admitted under that act?

Mr. WESCOTT. Yes.

Senator NELSON. Are you prepared to give the number?

Mr. WESCOTT. I could not give them all.

Senator NELSON. Can you supply it in your testimony?

Mr. WESCOTT. I can state, Senator, the number that were admitted to American registry up to October 9, 1914.

Senator NELSON. Very well, sir.

Mr. WESCOTT. There were 61, Senator.

Senator NELSON. Were they admitted with the foreign officers?

Mr. WESCOTT. They were admitted, Senator, with the foreign officers. As long as I have been asked that question, Senator, if there is no objection, I might just as well go ahead——

Senator NELSON. All right.

Mr. WESCOTT. Here is a circular letter, Senator, that was sent out by the United Fruit Co., dated November 28, 1914, signed by A. W. Preston, president. This is the way it reads:

UNITED FRUIT CO.,
Boston, Mass., November 28, 1914.

To foreign watch officers employed on American vessels in the United Fruit Co.'s steamship service:

As the steamships employed in the steamship service of the United Fruit Co. are foreign-built ships, the United Fruit Co. was unable to have them registered as American ships on account of the law of the United States until Congress passed the act of the 18th of August, 1914, which expressly provided for the transfer and registry of foreign-built vessels. But the law also provided that no watch officers should be employed on American vessels unless they were American citizens, and as a large number of the watch officers were not American citizens the United Fruit Co. was unwilling to transfer any of its ships to the American flag when doing so would necessarily result in the dismissal of faithful and loyal employees.

Therefore the United Fruit Co. took the position that it would transfer its ships to the American flag if the President of the United States signed an Executive order suspending the provisions of law as regards watch officers, and thereby enabling foreign officers employed on ships at the time of registry to continue thereon for a period of seven years without regard to citizenship. The officials of the company regarded it as only reasonable that foreign watch officers should have seven years within which to become naturalized as American citizens, especially as it did not seem fair to force officers to take out naturalization papers at a time when the country of their origin was at war.

As you know, President Wilson signed a form of Executive order satisfactory to the United Fruit Co., whereupon the company arranged for the immediate transfer of its ships upon their respective arrivals at ports in this country. Each

ship was transferred to a New York corporation bearing the same name as the ship, it being regarded as advisable and convenient to have the ships owned by separate corporations.

Senator NELSON. A separate corporation for each ship?

Mr. WESCOTT. For each ship; that was for the purpose of limitation of liability. [Reading:]

In these circumstances it seems advisable to direct your attention to the naturalization laws of the United States, of which there is inclosed a synopsis prepared by counsel for the company.

You will note that five years' continued residence in the United States is necessary in order to become a citizen. Therefore, if you have not already done so you should make sure that the immigration authorities at the United States port at which you reside have a proper record of the fact that such is your place of residence.

If you have already entered through the immigration office and resided in the United States for five years you can procure citizenship papers at the end of two years from the filing of your declaration of intention, or, in fact, if you have so entered and resided here for three years, you can make your declaration of intention at this time and take out your final citizenship papers after two years, which will complete your five years of continued residence in this country.

If it is your intention to become an American citizen we urge upon you the advisability of giving this matter immediate attention. However, under the above-mentioned Executive order, if you were employed on the ship at the time she was registered, you are entitled to serve thereon until the 3d day of September, 1921, when, according to the present law, you will be disqualified from further service unless you are an American citizen at that time.

In case there is any further information which you desire, we shall take pleasure in furnishing it to you upon request.

Kindly acknowledge receipt, and if you are prepared at this time to state your intention as regards citizenship, we should be pleased to have you do so. If you desire, we shall also be pleased to have our counsel at the different ports cooperate with you in assisting you to procure the necessary papers.

Yours, truly,

A. W. PRESTON, *President.*

I want to say, Senators, that at the time the Executive order was issued there were records in the Department of Commerce and Labor showing that there were 2,136 idle masters, mates, and engineers, which, I understand, were forwarded to the President before he issued the Executive order.

Senator JONES. American citizens?

Mr. WESCOTT. American citizens, native born or naturalized. I want to say that I called on Mr. Sweet and told him that I heard they were about to suspend the law and pleaded with him. I told him the number of men that were out of employment, and I told him I did not believe it was right. I told him that we ought at least to respect our flag more than to intrust the honor of it to non-citizens of the country. He said to me, "Captain, we have got to have the ships." I said, "There are plenty of idle men." "Well," he said, "they won't put their vessels under the American flag unless we take their foreign officers." "Then," I said, "Mr. Secretary, it will not make any difference how many idle men there are," and he said, "Captain, we have got to have the ships."

Senator NELSON. If those vessels had not come under our flag there would have been no room for our own citizens on those ships anyway?

Mr. WESCOTT. No, Senator.

Senator NELSON. If they were sailing under a foreign flag?

Mr. WESCOTT. Senator, they wanted to get out of the wet, and they would have put them under the flag. My opinion is that all in the

world those people wanted at that time was to get the law suspended, to get the laws governing steamboat inspection suspended also for a period of two years. They expected that this great war would be over in that time; and then, they not having had to go to any expense in getting their vessels equipped to comply with the inspection laws, they would take their foreign officers and their ships back under a foreign flag.

Capt. Robert Dollar stated to Representative Greene, of Massachusetts, that if the ship-registry bill passed, he would put his vessels under the American flag while the war lasted and put them back under a foreign flag when the war was over. Representative Greene himself told me I could make that statement.

Senator HARDING. Mr. Chairman, may I interrupt? I was just going to say, Captain, that I do not deny an interest in what you are saying. I think it is all very interesting, but I wanted to ask the chairman what particular bearing this had on our investigation. I did not understand that the seamen's act was in question or under investigation here.

The CHAIRMAN. This testimony has a bearing in this respect, that some question has been raised about our ability to man and officer the fleet that we are building, and the inquiry of the captain was as to whether it was possible for us to supply a sufficient number of officers for the vessels that we have building and as the officers will be needed. That is the relevancy of the testimony. There was some question put to him that led him on into this other discussion.

Senator HARDING. I thought we were getting a little far afield; that was all. I have a great deal of interest in what you are saying, Captain.

Senator JOHNSON. I wish, Mr. Chairman, to make one thing plain, if possible. You said, Captain, that in conversation with certain representatives of the departments it was stated that certain people would only put their ships under the American flag if they were permitted as well to continue in employment on those ships officers who were not citizens?

Mr. WESCOTT. I believe the Senator did not understand me quite right. I stated that I informed them as to the number of idle men, and they told me that they must have the vessels and that they would not bring them in unless these men came in with the vessels.

Senator JOHNSON. Who would not put them under the American flag unless these foreign officers came, too? The owners?

Mr. WESCOTT. The owners, I suppose.

Senator JOHNSON. Are those American owners?

Mr. WESCOTT. Well, here is the statement of the United Fruit Co., Senator, which bears that out very strongly.

Senator JOHNSON. They were American owners who said in so many words, "We will only put our ships under the American flag if we can sail them with foreign officers." That is the point.

Mr. WESCOTT. Yes, sir.

The CHAIRMAN. I think there is no doubt that that was their position.

Mr. WESCOTT. This circular letter bears that out.

Senator HARDING. Did Capt. Dollar take that position?

Mr. WESCOTT. Capt. Dollar made the statement to Representative Green of Massachusetts, and Representative Green told me I could make that statement.

The CHAIRMAN. Do you happen to know the difference in salary of these foreign officers and American officers on like vessels?

Mr. WESCOTT. There was but a very little difference at that time.

The CHAIRMAN. I mean at that time.

Mr. WESCOTT. At that time, Senator, there was but very little difference, with the bonuses, the leave of absence which they received, and the pension system. I could furnish you that data.

Senator HARDING. You will admit, Captain, that the circular from which you quoted urged the Americanization of these foreign officers, will you not?

Mr. WESCOTT. Senator, there was a string to it. It was stated that if they did not become citizens they could continue to serve on those vessels until the 4th day of September, 1921.

Senator HARDING. But they did urge them there, did they not, to do it at the earliest possible day?

Mr. WESCOTT. They told them to do that.

Senator HARDING. I only want you to be fair to them and take the circular at its face. If I understood your reading correctly, they asked them to give it immediate attention. I am not in the slightest way interested in their defense.

Mr. WESCOTT. I want to say this, Senator. I am broad-minded, but any man that is a white man and comes to this country and becomes a citizen because he likes our form of government and our institutions and not for convenience sake, I can take him by the hand and shake it and say, "You are as good an American as I am." But not otherwise. I believe that the trouble in this country has been that there has been too much of this "convenience sake" business. I found a great deal of it in 1905, which was straightened out when the present naturalization law was enacted. I called President Roosevelt's attention to it on the 24th day of April, 1905, and there was an investigation, an investigation throughout the United States, and through the investigation it was found that men had bought their citizenship papers on the streets and there was no record of them in the courts, paying from $30 to $50 apiece for them. And I believe the Senator from California can pretty nearly bear me out on that.

Senator MARTIN. What advantage was it to these American owners that foreign officers should be recognized?

Mr. WESCOTT. Senator, as I have stated, I believe it was the purpose at that time to transfer the vessels back under the foreign flag as quickly as the war was over.

Senator MARTIN. But meantime, while they were under the foreign flag, as I understand it, these American owners would not put them under the American flag unless they could bring the foreign officers.

Mr. WESCOTT. Senator, I believe the reason for it was that they expected to transfer their vessels back to the foreign flag as soon as the war was over.

The CHAIRMAN. Why? Why should they do that? That is the Senator's point. Why was it better for them to operate under the foreign flag than under the American flag?

Mr. WESCOTT. Well, they claim they can repair their ships cheaper, that they can run them cheaper, and the like of that.

Senator HARDING. As a matter of fact, the United Fruit Co. has a great many ships, has it not, some under the foreign flags and some under the American flag?

Mr. WESCOTT. I do not believe any of they are sailing under the foreign flag now. They were all sailing under the foreign flag then.

Senator HARDING. You are aware, Captain, are you not, that they have vessels which rarely touch any United States port, which sail directly from the banana fields to European ports?

Mr. WESCOTT. They may be under the foreign flag now; I could not say; but at one time they had no vessels under the American flag whatsoever.

Senator HARDING. I can not say when it was, but I remember taking passage on one of their ships to Jamaica, say about 11 years ago, and we sailed under the American flag.

Mr. WESCOTT. I want to say that on the 1st day of September, 1916, there was another Executive order issued that any of these men employed on the foreign-built ships who had declared their intention of becoming citizens within six months after that period should be entitled to serve on those vessels until they completed their citizenship and be eligible for promotion. On the 3d day of July, 1917, there was another Executive order issued that on all vessels engaged in foreign trade, regardless of whether they were American built or foreign built, the officers could serve on them regardless of their citizenship and regardless of what country they belonged to, as long as it was one of the neutral nations or one of the allied nations. And I want to say now that in our merchant service there have been 500 provisional licenses issued to masters and mates; 384 provisional licenses issued to engineers.

Senator NELSON. What proportion of the crews on American ships are not citizens of the United States?

Mr. WESCOTT. Do you mean to take the whole crew?

Senator NELSON. Yes; take the whole crew. What proportion are American citizens and what are not?

Mr. WESCOTT. There is nobody now required by law to be an American citizen on board an American ship engaged in the foreign trade—not a soul. No one is required to be, by law, at the present time; you can have a Japanese for master, or a Chinaman for master.

Senator NELSON. You still do not answer my question, which is, What proportion of the seamen in our merchant marine are citizens and what proportion are not?

Mr. WESCOTT. Well, Senator, it would be awfully hard to say. You might take some ship where there would not be a soul that would be an American citizen, because the law does not require any of them to be. On the vessels in the coastwise trade, where the officers are required to be citizens, there would be very nearly half the crew, or at least one-third of the crew, that would be citizens.

Senator NELSON. Is it not a matter of fact that the bulk of the sailors in our merchant marine are citizens of other countries?

Mr. WESCOTT. Yes, Senator; but the officers would offset that a great deal.

Senator NELSON. They are citizens of neutral countries?

Mr. WESCOTT. The officers themselves are supposed to be citizens; that is, on the coasting ships. They must be either native born or naturalized.

The CHAIRMAN. That does not apply to the crew?

Mr. WESCOTT. That does not apply to the crew; no, Senator. It has never applied to the crew, except in 1813 and in 1832. In 1832 one-half of the crew were required to be exclusively American; in 1813 all were required to be.

The CHAIRMAN. Have you a record that would show the number of men employed in foreign trade on American vessels and their nativity, their citizenship?

Mr. WESCOTT. No; we have never taken that, Senator, because we do not allow a man to become a member of our organization that is not a citizen of the United States, either native born or naturalized.

Senator HARDING. I like you for that.

Mr. WESCOTT. Anyway, they are all citizens of the United States; and I want to say to you now that I do not believe we have any at the present time who have come in for convenience' sake, because those that come in for convenience' sake we eliminated in 1905 and 1906. Most of them have since become naturalized, because they like our form of Government and our institutions.

The CHAIRMAN. You spoke about the number of licenses issued to masters and mates. Are all of them members of your order?

Mr. WESCOTT. Not all, Senator. I suppose probably 75 or 80 per cent on the Pacific are members.

The CHAIRMAN. And on the Atlantic?

Mr. WESCOTT. On the Atlantic they belong to the Neptune Association, another organization.

The CHAIRMAN. How about the Great Lakes?

Mr. WESCOTT. Our organization is composed only of ocean men; we have no inside men in our organization.

The CHAIRMAN. The sailors are mostly of foreign birth, are they not.

Mr. WESCOTT. Mostly of foreign birth.

The CHAIRMAN. And the firemen, too?

Mr. WESCOTT. Yes—well, on the Pacific there are quite a few Americans, but the large majority of them are of foreign birth.

The CHAIRMAN. The cooks and stewards are generally of American birth, are they not?

Mr. WESCOTT. No; the cooks and stewards on the Pacific, I believe, there are more English than any other nationality.

Senator NELSON. Do they not have a good many Chinese cooks and stewards?

Mr. WESCOTT. No; there are only four American vessels on the Pacific that carry Chinese cooks; that is, regular liners.

Senator NELSON. And how about the vessels not on regular lines?

Mr. WESCOTT. Well, there are vessels that are tramping around. They carry all classes—Filipinos and everything else.

Senator JONES. We have not many American vessels on the Pacific, have we, Captain, outside of the coastwise trade?

Mr. WESCOTT. Not now, Senator, because they are taking them all off. They have taken the *Wilhemina*, the *Manoa*, the *Maui*, and *Matsonia*, and have placed the *President* and *Governor* in their places.

Senator JONES. Those are vessels that were in the coastwise trade, are they not?

Mr. WESCOTT. No; we only had seven vessels. Spreckels had three on the Honolulu route. They also took over the *Great Northern* and *Northern Pacific*, as you know.

Senator JONES. When the war broke out we had practically no overseas vessels on the Pacific under the American flag?

Mr. WESCOTT. No; we only had seven vessels. Spreckels had three vessels running to Australia—the *Sonoma*, *Sierra*, and *Ventura*—and there were four running to China.

Senator HARDING. That is the Oceanic Line?

Mr. WESCOTT. The Oceanic; yes.

They are operated by the Pacific Mail Co. to China. They are the *Venezuela*, *Ecuador*, and *Colombia*, and the *Nankin* and *China*, which belong to the China Mail Co.

The CHAIRMAN. When those were taken off where were they transferred?

Mr. WESCOTT. The *Mongolia* and the *Manchuria* are on the Atlantic; the *Minnesota* is on the Atlantic. The *Siberia* and the *Korea* were transferred to the Atlantic and then were sold to the Japanese, and they are on the Pacific under the Japanese flag.

The CHAIRMAN. Do you know when they were sold?

Mr. WESCOTT. The *Korea* was sold, according to the records, some time between June 30, 1916, and December 31, 1916. I believe she was the first one that was sold, and then the *Siberia*, I believe, followed her in the fore part of 1917.

Now, Senator, I want to say that there is a surplus of deck officers at the present time. There are no less than 400 of such on the Pacific coast. United States local inspectors at the various ports on the Atlantic, Pacific, Gulf, Porto Rican, and Hawaiian ports are issuing original licenses to second and third mates at the rate of not less than 70 per week. In six months' time that would mean an increase of 1,820 second and third mates, or, in other words, a sufficient number of that particular class of officers to man 900 ships, and in one year 1,800 ships, that being two to each vessel. That is the average rate that they are turning those officers out.

We have approximately 1,300 seagoing vessels propelled by machinery, of 100 gross tonnage and over, which includes the Atlantic, Pacific, Gulf, Porto Rican, and Hawaiian waters.

Senator HARDING. Captain, these grants of licenses now are perfectly regular and in the normal way?

Mr. WESCOTT. Senator, they are not required to have as much experience as they did heretofore.

Senator HARDING. Is there any controversy between these men and the ship operators over the question of employment in any way?

Mr. WESCOTT. No, Senator.

Senator HARDING. No question of wages or working conditions?

Mr. WESCOTT. No; they are issuing these licenses for second and third mates to man the new ships.

Senator HARDING. Then, there is nothing to iron out except the policy of putting on a naval command for the war zone?

Mr. WESCOTT. Senator, I want to touch on that naval question in just a moment.

Senator HARDING. That is particularly what we want to get at. We have so much before us.

Mr. WESCOTT. I will touch on that, Senator, in just a minute.

On the Pacific there were 788 steam vessels of all classes inspected during the year ending June 30, 1917. During the same period 854 five-year licenses were issued to masters of steam vessels, and 293 five-year certificates were issued to mates of ocean steam vessels, and 146 five-year licenses were issued to mates of inland waters, and 99 to pilots of inland waters.

In the year ending June 30, 1916, there were 805 steam vessels inspected. During the same period there were 421 five-year licenses issued to masters, and 223 five-year certificates were issued to ocean mates, 89 licenses were issued to mates of inland waters, and 89 pilots' licenses were issued. I want to say that the difference in those two years was caused to a large extent by the fact that in 1897 there was a law enacted that the licenses should be issued for the period of five years. Previous to that there were one-year licenses issued. During the past five years approximately 2,538 five-year licenses have been issued to masters of steam vessels of all classes on the Pacific, and 1,185 to ocean mates, 502 to mates of inland waters, and 490 to pilots of inland waters, making approximately a total of 4,715 five-year licenses issued to masters, mates, and pilots of steam vessels on the Pacific.

The number of five-year licenses issued to masters of steam vessels in the United States in the past three years was 8,964, and for the past five years approximately 13,215.

I want to say that, according to the supervising inspector's report for 1917 only 5,500 steam vessels were inspected, there being 13,000 masters' licenses issued, approximately, in the last five years.

Now, I would like to call the Senators' attention to this fact. Many times where ocean steamers carry two or more mates it has so happened that all the mates are certificated masters, because there is not a sufficient number of positions for the mates that hold masters' licenses to serve in that particular grade. Therefore they have to sail as chief mate, second mate, and ofttimes third mate. Only 1 out of every 15 that receives a second or third mate's licenses ever becomes a permanent master, for lack of opportunity.

In case the Navy should take over the merchant marine more than 50 per cent of the certificated masters and chief mates, who are the real skilled navigators and seamen in the true sense, would be lost to the merchant marine on account of being unable to pass the physical examination as required by the rules and regulations. But, regardless of that fact, they are mentally the superior of the younger men in matters nautical, which is necessary in the present crisis, being seamen of the old school and having obtained their knowledge by hard knocks.

In case the Navy should take over the merchant marine I want to call your attention to the fact that there would be 50 per cent of the skilled men holding masters' and chief mates' licenses that could not pass the physical test, but who are perfectly able to perform the duties of masters and chief mates and do it with credit to themselves.

Senator RANSDELL. Could they pass all tests except the physical?

Mr. WESCOTT. All tests; yes. In regard to the eyes I want to say that every five years every man that holds a deck officer's license has

his eyes examined. The last year there were some 60 turned down. The engineers do not have to stand any eyesight test for color blindness.

The CHAIRMAN. In what respect would they fail on physical examination?

Mr. WESCOTT. You take the men that have been seamen for years, and when they get to be from 40 to 55 or 60 years old and have had many hard knocks 50 per cent of them would fail.

Senator RANSDELL. You said "color blindness." Do you mean that many of them would be rejected on that account?

Mr. WESCOTT. No; the rules and regulations of the Steamboat-Inspection Service require that all masters and mates must be examined for color blindness once every five years.

Senator HARDING. Old Capt. Hondlette was not incapacitated at 70 years?

Mr. WESCOTT. No, sir; he was not. That is what I am saying: that 50 per cent of these men would fail on the physical test for this reason. You know when the Government comes to examine a man where he is to be pensioned off in case anything goes wrong with him they are going to be pretty particular.

The CHAIRMAN. What number of masters and mates are now idle?

Mr. WESCOTT. We have at least 400 on the Pacific, Senator.

The CHAIRMAN. Do you know how that is on the Atlantic and on the Lakes?

Mr. WESCOTT. They have a great surplus of second and third mates on the Atlantic; they are turning them out all the time. In New York they turn them out at the rate of about 42 to 44 every two weeks—second and third mates, with original licenses. Now, it is the masters and mates that we have got to get from these other ships; that is, the men sailing as chief mates on vessels at the present time and who hold master's certificates, and those that are serving as second mates on various vessels and holding master's certificates, of which there are many.

I want to call the Senators' attention to an article that I cut out of the Philadelphia Evening Telegram for the 16th. (Reading:)

NAVAL OFFICERS' FAMILIES FORBIDDEN NEAR SHIPS—DANIELS SAYS DOMESTIC AFFAIRS MUST NOT DETRACT MEN'S ATTENTION FROM WAR DUTIES.

WASHINGTON, *January 16.*

In order that domestic affairs may not detract the attention of naval officers from their more important official duties, Secretary Daniels has forbidden officers establishing their families in the immediate vicinity of the ships on which they are serving. The prohibition is carried in a general order which says:

"The attention of all officers of the Navy and Marine Corps is directed to the fact that, due to the very large number of vessels to be commissioned in the near future and to the limited number of officers available, it becomes absolutely necessary for every officer to devote his entire time and attention to the preparation of every element of the fleet for meeting the enemy. In order that there may be no distraction from this duty, neither officers nor men should attempt to have their families in the immediate vicinity of the vessels upon which they are serving, particularly in the vicinity of fleet bases, and the department looks with decided disapproval upon such procedure."

Now, Senators, if they have any shortage of officers in the Navy at the present time, how is it possible for the Navy to officer these ships of the merchant marine? They have got to take them from

the merchant marine in order to man them, and then there would be the 50 per cent of experienced men that would be debarred.

Senator NELSON. These officers that they proposed to put on merchant vessels, as I understand it, are simply for a small crew in the forecastle, and they are put there because of their qualifications as gunners—as naval men. You do not mean to say the ordinary sea captain has any qualifications of that kind?

Mr. WESCOTT. Senator, their proposition is to put as masters of the vessels Navy men, to put as chief mates Navy men, and the same way with all of the licensed men.

Senator NELSON. Oh, I do not so understand it.

Mr. WESCOTT. Oh, yes, Senator, that is it; that is an absolute fact. That is the propaganda.

Senator NELSON. I do not understand that is the plan of the Government. The plan of the Government is, and the contention has been over putting a crew of naval men on the ship to handle the guns.

Mr. WESCOTT. They have them, Senator.

The CHAIRMAN. That is a separate matter entirely from manning the vessel.

Mr. WESCOTT. Certainly. They have those on the vessels already. Their idea is to put all naval officers and naval crews on the vessels.

The CHAIRMAN. The statement is made that the number of men required for new merchant crews is estimated at from 55,000 to 60,000 men, and doubt has been expressed about the possibility of getting those men any other way than by having the Navy do it.

Mr. WESCOTT. This clipping states that they are short of officers, and we point out where the officers can be obtained.

Senator NELSON. As to the seamen, they can not enlist anybody now in the Navy unless they are citizens. Foreigners can not be enlisted in our Navy now.

Mr. WESCOTT. I realize that, Senator.

Senator NELSON. And therefore they are more limited. For the merchant marine they can draw men from all over the world, but the Navy is confined to American citizens, and, naturally, they absorb all of that kind.

Mr. WESCOTT. Certainly. At the present time there are 33,000 able seamen's certificates outstanding. The law only calls for 50 per cent of the crew to be able seamen; therefore you could take 33,000 more and put them right in. To man your merchant vessels only requires 12,000 more men, and if you would get the men that are holding able seamen's certificates back to sea at the present time you would not even have to call on more than 6,000. You would not even have to call for any more able seamen.

The CHAIRMAN. You think the officers can be supplied as they are needed?

Mr. WESCOTT. Yes, sir. I do not think so; I am positive.

The CHAIRMAN. Is there anything else you want to say?

Mr. WESCOTT. In connection with my statement I would like to submit some resolutions of the organization I represent, adopted at a regular meeting and forwarded to the President September 21, 1917, no reply having been received.

The CHAIRMAN. The resolutions will be printed in the record.

Mr. WESCOTT. I think that is all, Senator. I thank you, very much.

The CHAIRMAN. We are much obliged to you, Captain.

(The resolutions submitted by Mr. Wescott are here printed in full, as follows:)

RESOLUTION.

Whereas we, the Masters, Mates, and Pilots of the Pacific, the Marine Engineers Beneficial Association No. 35-38, and the Shipmasters' Association of the United States, located on the Pacific, with a membership of 2,500 licensed masters, mates, and engineers of ocean and coastwise steam vessels, all of whom are native-born or naturalized citizens of the United States; and

Whereas, as law-abiding native-born and naturalized citizens we realize the many qualifications necessary for good citizenship and the responsibilities which were handed down by the old patriots for the protection of our flag and our citizenship; and

Whereas many of our members tendered their services to the Navy Department through purely patriotic motives, both native-born and naturalized, and many of them were accepted, but such men and all others feel that the Government by permitting the honor of our flag to be intrusted to alien officers have deprived them of their birthright; and

Whereas in 1792 the old patriots, God bless them, caused to be enacted into law a provision that no vessel flying the American flag could depart from a port of the United States unless the officers were citizens thereof; and

Whereas it is only fair to assume that our forefathers caused the aforesaid provision to be enacted into law for the purpose of protecting our flag and thereby protecting our country and to impress the fact upon other nations that we respect our flag and citizenship, and that they must do likewise; and

Whereas it behooves every native-born and naturalized citizen to insist that our flag and citizenship shall be respected, and that the honor of our flag shall no longer be intrusted to any others than citizens of the United States; and

Whereas the British Parliament prior to the present war with Germany realized the danger of allowing British vessels to be officered by alien officers, as the following remarks made by Mr. Peto and other members of the British Parliament will show during the debate on an appropriation bill, which was printed verbatim in the Guild Gazette dated February 2, 1914, and reads as follows:

"Mr. PETO. The question of alien officers on British ships is one which undoubtedly requires regulation at once. The number of alien officers may not seem very great. We have 63 alien masters and mates on sailing ships and 62 alien masters and 272 alien officers on steamships, but I may say under present conditions there ought to be none. Whatever may be necessary with regard to the crew, it would be perfectly simple to make it an absolute condition of flying the British flag that the ship should be adequately officered and officered by British subjects. The Admiralty have recently and, I think, very properly taken steps to use our merchant fleet as the eyes of the Navy. They have issued a form to steamship owners asking them to communicate with their captains and arrange that in time of war information should be given as to the character of every vessel which is sighted. That may be of enormous importance, but, considering when the pilotage bill was before the house, it was felt necessary to give special powers to the Admiralty to preclude alien officers who hold the pilot certificate from certain pilotage district, surely it is equally necessary that the board of trade should collaborate with the Admiralty in this matter of alien officers. Pilotage into port is not the only thing of importance in time of a naval war. It is clearly of importance that the Navy should have immediate information of foreign vessels sighted in certain waters. Such information at once communicated to the right people might be the means of saving us from naval disaster or, at any rate, of putting us in a very much better position than if we had not the information. It is not safe or wise or in accordance with the course taken by the Government under the pilotage bill that we should any longer allow the flying of the British flag by vessels with alien masters and officers."

"Mr. BUXTON. Taking the whole of the British registry throughout the world there are at present 7,995 masters, of whom only 87 are aliens."

"Mr. SHIRLEY BENNS. There is nothing more dangerous to our commerce than having foreign captains on British vessels. There is no telling, in case of a war, what wrongful communications British ships officered by foreigners might not make to our naval authorities."

"Mr. BUTCHER. The first is the question of alien masters and officers in command of British ships, enjoying the privileges of British law and registration at a British port, should be in a position that the master and every officer on board may be an alien. Not only is it an abuse in itself that this should be so, but it is a danger, especially in war time. We know that in war time confidential information has to be given to masters of British ships, and it hardly needs any comment to show what the position would be if masters who get this confidential information were foreigners who could give it to our enemies"; and

Whereas it should not be necessary herein to elaborate upon the fact that Great Britain early in her war with Germany found it incompatible with the public good to retain in her service upon her merchantmen any officers of foreign birth, even citizens of the Empire and residents therein for many years; and

Whereas those officers now debarred from service on British ships and also native-born Britishers and alien officers from other foreign countries are flooding to America seeking employment in the higher grades on our ships under the terms of the Executive order of July 3, 1917; and

Whereas in the name of good citizenship and for the respect of our flag we protest against the Government promulgating any inducements that may have the effect of inducing aliens to become citizens of the United States for convenience sake, and in our opinion the Executive order of September 1, 1916, will have that effect; and

Whereas it seems pertinent at this time to recall that upon the invitation of the Hon. William C. Redfield and the Hon. W. B. Wilson, a large number of representatives of licensed deck and engineer officers only recently assembled in the city of Washington for the purpose of assisting the various departments of the Government in determining and removing any existing obstacle to the return to sea life of all able-bodied licensed men and seamen who have been engaged in shore pursuits, and to aid in extending a call to the sea to our young men; and

Whereas the honorable Secretary of Commerce on the 1st day of August, 1917, made the statement in public that he had recommended the suspending of the law prescribing that watch officers of vessels of the United States registered for the foreign trade shall be citizens of the United States, and that in his opinion his recommendation was primarily responsible for the issuing of the Executive order of July 3, 1917; and

Whereas on the 11th day of August, 1917, a letter protesting against the practice of permitting alien officers to act as watch officers on merchant vessels of the United States registered for the foreign trade was sent to the Hon. William C. Redfield, Secretary of Commerce, the inclosed copies appended hereto being a copy of the said letter and the reply thereto; and

Whereas we can not conceive of a single reason why the Government should imperil the national safety by officering American ships in time of war or at any time with alien officers, but we can conceive of many reasons why the Government should not, as heretofore stated; and

Whereas that grave national danger underlies the entire operation of the Executive order of July 3, 1917, requires but moderate acquaintanceship with the facts, and that it will long remain uncorrected is inconceivable; and

Whereas the natural effect of the Executive order of July 3, 1917, will, in our opinion, deter recruiting and counteract the effect of the large objects and expenditures to which the recruiting division of the Shipping Board has committed itself, and will be a harmful influence in the form of discouraging the American boy from entering upon a sea-going career; and

Whereas with these facts before us and knowing that no shortage of masters, mates, or engineers exists, we can not refrain from pressing the point that the greatest obstacle to overcome in order to induce the licensed men back to the sea is the Executive order of July 3, 1917, for no self-respecting, law-abiding, native-born or naturalized citizens care to sail on ships where their superior officers are noncitizens of the United States: Therefore, be it

Resolved, That we, the Masters, Mates, and Pilots of the Pacific, Marine Engineers' Beneficial Association of Seattle and San Francisco, and the Shipmasters' Association of the United States on the Pacific, in regular meeting as-

sembled, do most earnestly and respectfully petition you, our President, to reconsider all Executive orders suspending the provisions of law prescribing that the watch officers of vessels of the United States registered for foreign trade shall be citizens of the United States; be it further

Resolved, That a copy of the resolutions be forwarded to the President of the United States and spread in full upon the minutes of all organizations subscribing hereto.

Adopted September 17, 1917, by the Masters, Mates, and Pilots of the Pacific.

WILLIAM A. WESCOTT, *President*.

Attest:

W. H. STARK, *Secretary*,

Headquarters, 36 Steuart Street, San Francisco, Cal.

Adopted September 18, 1917, by the Marine Engineers' Beneficial Association No. 35, 146 Steuart Street, San Francisco, Cal.

GEO. COMSTOCK, *President*.

Attest:

JOHN J. SEARY, *Secretary*.

Adopted September 21, 1917, by the Shipmasters' Association of the United States, Colman Building, Seattle, Wash.

FRED WARNER, *President*.

Attest:

W. T. ISTED, *Secretary*.

Adopted September 21, 1917, by the Marine Engineers' Beneficial Association No. 38, Arcade Building, Seattle, Wash.

C. S. FOLLETE, *President*.

Attest:

W. B. JACKLING, *Business Manager*.

The CHAIRMAN. Mr. Rhodes, of Tacoma, Wash., is here, and as he wants to return as soon as possible, we will hear him now. I believe, Senator Jones, you want to ask some questions of Mr. Rhodes.

Senator JONES. Yes, sir. I will say that I asked the chairman of the committee to ask Mr. Rhodes to come before the committee, because he is engaged in wooden-ship building at Tacoma and has had some experience with shipbuilding, and I thought it would be of benefit to the committee.

STATEMENT OF MR. H. A. RHODES, PRESIDENT TACOMA SHIPBUILDING CO., TACOMA, WASH.

Senator JONES. Please state your name, Mr. Rhodes.

Mr. RHODES. H. A. Rhodes.

Senator JONES. You live at Tacoma?

Mr. RHODES. Yes, sir.

Senator JONES. What company do you represent?

Mr. RHODES. The Tacoma Shipbuilding Co.

Senator JONES. How long has that company been in operation?

Mr. RHODES. From the time we organized, about a year; in actual operation possibly eight months.

Senator JONES. Who are the owners of the company?

Mr. RHODES. The stockholders?

Senator JONES. Yes; the principal ones.

Mr. RHODES. Judge W. H. Snell, W. R. Rust, John S. Baker, Maj. E. J. Griggs, Mr. T. D. Whipley.

Senator JONES. All of Tacoma?

Mr. RHODES. Yes, sir.

Senator JONES. What resources do they represent?

Mr. RHODES. Our company is capitalized for $300,000.

Senator JONES. What is the financial standing of the men whom you have named, and the other members of the company?

Mr. RHODES. I presume the personal worth of these gentlemen I have named would run up to over $10,000,000 or $15,000,000.

Senator JONES. So that they are able to carry out any agreement they may make?

Mr. RHODES. I might say it is a perfectly close corporation, and these gentlemen are putting themselves back of this company to carry out any contract we enter into.

Senator JONES. What position do you represent in the company?

Mr. RHODES. President.

Senator JONES. Have you any contracts with the Government?

Mr. RHODES. We have contracts for four Ferris-type boats.

Senator JONES. The hulls?

Mr. RHODES. Hulls only.

Senator JONES. When did you get these contracts?

Mr. RHODES. The application was made some time about the 1st of June. It was confirmed through the district officer from Seattle on July 9, with the statement that the official contract would be forwarded from Washington immediately for our signature, and would then be returned to them for their final signature. We did not receive that contract for official signature until September 20.

Senator JONES. Did that cause any delay in your operations?

Mr. RHODES. That caused a great deal of delay, because on notice of the signing of our contract through the district officer at Seattle we proceeded immediately to order our materials and our machinery necessary for the boat, putting up our buildings, letting our railroad contracts and contracts for all the other necessary equipment for getting up a first-class yard. When we placed our order for lumber we were informed by the lumber mills that we had no contract with the Government, and therefore they could not assign us the particular units which we required for these boats, because they were committed to the Government for all their output.

We were confronted with the same condition with reference to iron and steel that we required. It seems that these people who had given the commitment to the Government for their output could not deal with companies or other parties unless they had the hull number of the particular ship. We had not been assigned that hull number, and therefore our orders were withheld. After September 1 we did not have that trouble; but, of course, we were so late in the progress of our work that it delayed us somewhat in building the present ships.

Senator JONES. Do you know anything as to the reason for that delay here at Washington?

Mr. RHODES. I do not.

Senator JONES. At any rate that delay caused you a couple of months' delay in the progress on your ships?

Mr. RHODES. We figured it did, Senator. Of course, in the meantime we got some lumber. We were working, but not to anywhere near full capacity or the capacity we would have been able to work to if we had had sufficient aid from the Government in that respect.

Senator JONES. Have you the capacity for building additional ships?

Mr. RHODES. We have capacity for laying down 10 ways. We could easily take on contracts to fill up 6 more ways; we have but 4.

Senator JONES. That is, one ship to each way?

Mr. RHODES. One ship to each way; yes.

Senator JONES. Have you endeavored to get contracts?

Mr. RHODES. We have.

Senator JONES. What has been the result?

Mr. RHODES. I really do not know the result. We have propositions in with the Shipping Board at the present time. I have no assurances either way; I am in doubt.

Senator JONES. When did you put in your application?

Mr. RHODES. We put in our first application day before yesterday. We figured on that application on the same basis that we used in the first contract; that is, so far as lumber and labor are concerned. That is the only way we felt we could figure intelligently. We submitted that to the board. That was based on labor and lumber conditions as of June 1, asking protection above that for any time after, up to the present time. They stated they preferred to have us make our basis as of November 4, that a new scale had been practically agreed upon for labor, and a $40 average for lumber had been established, and they wanted us to use that in our figures. We then went back and figured on that basis.

Senator JONES. Did they furnish the scale of wages?

Mr. RHODES. Yes, they furnished the scale of wages. The commissioner of labor furnished us that scale.

We then figured upon that scale. In figuring upon that scale it added up to a certain sum, and taking the scale as of June 1, it would add up to another sum, and it was easily determined what percentage of increase that would represent. If that was to be followed out on a straight average throughout the work on the ship, we could figure definitely as to prices, but some of those increases were 10 or 15 and some as high as 33⅓ per cent over the old scale. They will not work out evenly.

For instance, some of the men whose wages were increased 33⅓ per cent may work double the time of a person whose scale has been increased 10 or 15 per cent. Therefore, a contractor can not figure accurately what that increase of scale would represent in the price of labor per ship, and that must be figured in as an unknown quantity. Anyone who knows anything about contracting knows that when you have got to figure with an unknown quantity you have got to figure to cover it.

After figuring that we presented that proposition, based on that scale of wages and based on $40 per thousand for the lumber. We also included an alternate bid with the labor basis as of June 1, or to be exact, May 25, with lumber at $35 a thousand, asking protection for labor and lumber over and above that amount. We felt that that was the fairest bid to the Government and to ourselves, inasmuch as any increase over that amount had been caused by the Government, should be paid by the Government, and there would be no profit accruing to the contractor if paid.

Senator JONES. Do you remember what your bids were for the hulls?

Mr. RHODES. I remember.

Senator JONES. State it to the committee.

Mr. RHODES. The bid based upon labor as of November 4—would it not be just as well, Senator, if I submitted a copy of that bid, in order to have it exact?

Senator JONES. If you have a copy of it. In the meantime state in substance what it is?

Mr. RHODES. Based upon labor as of November 4 and December 14—part of the scale was fixed November 4 and part December 14—and also including the bonus which was to take effect December 14, of 10 per cent increase for all men who are employed consecutively for six days of eight hours, and a $40 average for lumber—our proposition was, based on those conditions, first for eight hulls, $349,000.

Senator JONES. If you have the proposal there you may just refer to it.

Senator NELSON. Was that for each hull?

Mr. RHODES. For each hull. For six hulls, $348,000; for four hulls, $347,000, asking for a protection clause for any advance in labor over and above those prices, and also for any advance in the price of lumber over and above the price of $40 per thousand.

That was the first bid. Our alternate bid was based on labor as of May 25, the scale of labor that prevailed in that district at that time, and lumber at $35 per thousand, and protection for any increase in price over and above those prices. Based on those conditions, our bids were: For eight hulls, $298,000; for six hulls, $299,000; and four hulls, $300,000.

I might say, Senator, that the $300,000 is the price that we took our present contract for, when we figured on labor at the scale then prevailing, May 25, and with lumber at $35 a thousand; and I think I am safe in saying that 90 per cent of the contracts that were let on the Pacific coast at that time were let for $300,000; some over.

Senator HARDING. If you have the figures now in mind, for our information will you say in round numbers what the modified lumber charges and labor charges have added to the cost of those hulls, each?

Mr. RHODES. The lumber charges have been increased exactly $5, Senator.

Senator HARDING. I am asking for the total increase on the hull; I do not ask you to go into details. I just want to get a little intimation of the added cost of the hull because of the increased price of lumber and labor.

Mr. RHODES. I have not those figures here; those figures I have in my hotel room.

Senator HARDING. Could you give it in round numbers

Mr. RHODES. It would be the difference between these quotations of $300,000 and $347,000.

Senator HARDING. In other words, about $47,000 a hull?

Mr. RHODES. Yes, sir. That is based on a bid for four boats. If we receive six or eight, naturally we can shade that a little bit, because we can work a little more efficiently and economically.

The CHAIRMAN. That includes the difference in wages as well as lumber?

Mr. RHODES. Yes, sir; that includes the difference in wages.

The CHAIRMAN. Can you get your lumber now?

Mr. RHODES. Yes, sir; we can get our lumber if we have assistance from the emergency fir bureau. If the Government will place emer-

gency orders through the emergency fir bureau we can secure our lumber.

Senator NELSON. When was your corporation formed?

Mr. RHODES. The corporation was formed about a year ago; I do not know the exact date.

Senator NELSON. Had you or the other members of the corporation been engaged in shipbuilding before that?

Mr. RHODES. The stockholders had not; no, sir. Our general manager and our superintendent and architect are old men at the game.

Senator NELSON. You had no yard at all, then, until after you formed the corporation?

Mr. RHODES. No yard.

Senator NELSON. Didn't you go into this for the purpose of taking these Government contracts?

Mr. RHODES. Yes, sir; we did.

Senator NELSON. And you have not built any other ships than these that you have in hand for the Government?

Mr. RHODES. No, sir.

Senator NELSON. You spoke about being delayed in getting your contracts. Did you have your yard ready for laying the keels if you had the material for the ships?

Mr. RHODES. Yes, sir; we had it ready.

Senator NELSON. When did you have the yard ready?

Mr. RHODES. We had our yard purchased. We bought the site and everything immediately when we had our notice from the branch office at Seattle.

Senator NELSON. When did you get ready to lay the keels?

Mr. RHODES. I can not give you the exact date.

Senator NELSON. Just give it as near as you can.

Mr. RHODES. I would say I think it was about August—some time in August.

Senator NELSON. Then, of course, you could not build ships until you had the ways built?

Mr. RHODES. No.

Senator NELSON. And so there could not have been any delay prior to that time in your shipbuilding?

Mr. RHODES. No, sir.

Senator NELSON. You can not charge that up to the Government?

Mr. RHODES. No.

Senator NELSON. And your contract was let in September, I believe?

Mr. RHODES. Our contract was granted in September.

Senator NELSON. I mean, was signed in September?

Mr. RHODES. Yes, sir.

Senator NELSON. So that there was not over a month's time elapsed, or hardly that, between the time you had your yard ready with ways for laying down keels at the time your contract was made.

Mr. RHODES. Understand, Senator, we had to get our lumber orders placed and orders for steel, iron, oakum, and all that, before that——

Senator NELSON (interposing). I understand; but answer my question directly. Is it not true that there was not really a month's differ-

ence between the time you had your yard ready with the ways and the time the contract was let?

Mr. RHODES. According to those dates I have given, that would figure about a month. I do not remember the exact dates, but I think it was really longer than that.

Senator NELSON. About a month?

Mr. RHODES. Yes.

Senator JONES. But you wanted—right in connection with that, Senator Nelson—to make arrangements for your ships before that, and could not do it?

Mr. RHODES. That is right.

Senator JONES. And had you been able to do that you would have expedited the building of the ships before you got the ways?

Mr. RHODES. Yes, sir.

Senator NELSON. You do not have any other shipbuilding in view at present except Government work, do you?

Mr. RHODES. No, sir. We prefer doing the Government work; that is what prompted us to go into that business.

Senator NELSON. And you built your own yard at your expense, with your own capital?

Mr. RHODES. Yes, sir.

Senator NELSON. The Government did not advance you any money?

Mr. RHODES. Not a cent.

Senator NELSON. And you are simply building the hulls?

Mr. RHODES. Yes, sir.

Senator NELSON. What is the average rate per ton that you are getting for your ships—you have four of them, I believe?

Mr. RHODES. I think it figures around $85.

Senator NELSON. That is $85 for the hull?

Mr. RHODES. I had better qualify that; it is only a 3,500-ton boat, and we received $3,000 for it.

Senator JONES They are the Ferris type?

Mr. RHODES. They are the Ferris type; yes, sir.

Senator NELSON. That makes $85 a ton, you say?

Mr. RHODES. I think so.

Senator NELSON. Just for the hull?

Mr. RHODES. Yes, sir.

Senator NELSON. And you are building those vessels from your Pacific coast fir timber?

Mr. RHODES. Yes, sir; Douglas fir.

Senator NELSON. Altogether?

Mr. RHODES. Yes, sir.

Senator RANSDELL. What is the length of those vessels?

Mr. RHODES. Two hundred and eighty-one feet.

Senator NELSON. What is the beam?

Mr. RHODES. Forty-six feet.

Senator NELSON. You have contracts for four?

Mr. RHODES. Yes, sir.

Senator NELSON. How many ways have you?

Mr. RHODES. We have four ways. We will have completed those four, I think, if we have good luck at all, somewhere in July.

Senator NELSON. You speak about the increase of the price of lumber?

Mr. RHODES. Yes, sir.

Senator NELSON. The wages have been increased by that board, have they not?

Mr. RHODES. Yes, sir.

Senator NELSON. About 81 per cent from what they were in 1916?

Mr. RHODES. I do not know the exact percentage; I know it runs pretty high.

Senator NELSON. And then, in addition to that, there is 10 per cent bonus for those who work six days a week?

Mr. RHODES. Yes, sir; continuously.

Senator NELSON. Have you been troubled with any strikes there, or threatened with strikes?

Mr. RHODES. No, sir; not in our yard.

Senator NELSON. Or in the lumber camps where you are getting your lumber?

Mr. RHODES. They had a strike in the summer in the lumber camps, which lasted about four to six weeks.

Senator NELSON. Did not that delay getting the lumber?

Mr. RHODES. Yes; that did, some.

Senator NELSON. Has not your difficulty been due more to delay in getting the lumber than failure to get the contract signed?

Mr. RHODES. No, sir; it has not.

The CHAIRMAN. How far have you progressed with these four ships which you have under way?

Mr. RHODES. Yes, sir.

The CHAIRMAN. I say, how far?

Mr. RHODES. How far?

The CHAIRMAN. Yes.

Mr. RHODES. We have them all ready for the ceiling and planking, the frames, stern, and stem; the keelsons are all in, and I presume they are quite along with the plank ceiling at this time. The boats are progressing at nearly an even ratio.

The CHAIRMAN. You will have them all completed about the same time?

Mr. RHODES. There will not be very much difference. We find it more economical to bring them all up at the same time.

The CHAIRMAN. You think of launching them about July?

Mr. RHODES. We expect to have them all, unless possibly one of them, launched during the month of July, or before that.

Senator NELSON. When do you expect to have them completed?

Mr. RHODES. That nearly completes them ready for the machinery. We do not have the installation of the machinery.

Senator NELSON. That makes it nearly complete ready for the machinery?

Mr. RHODES. Yes, sir; that is, when we are ready to take on new contracts and immediately commence work.

Senator NELSON. Have you information as to how soon the machinery may be secured to equip the vessel for sea?

Mr. RHODES. There are a great many machine shops out there. I do not know; the Government has that all in hand itself, and I can not answer that intelligently.

The CHAIRMAN. You have never had any experience before in shipbuilding, Mr. Rhodes?

Mr. RHODES. No, sir; I have not. I have always handled large crews of men; I have been an employer of labor nearly all my life.

The CHAIRMAN. What has been your business?

Mr. RHODES. Department store.

The CHAIRMAN. And some of your associates are experienced shipbuilders?

Mr. RHODES. Our general manager, who is a stockholder, is one of our oldest contractors.

The CHAIRMAN. Where did he build ships before?

Mr. RHODES. He did not build ships. The superintendent shipbuilder and our architect has built ships all his life and claims to have the record of laying down about 80 or 90 keels.

The CHAIRMAN. Where?

Mr. RHODES. A number of them at Puget Sound, some on the Great Lakes—I could not name all the places.

The CHAIRMAN. Wooden ships?

Mr. RHODES. Wooden and steel, both. He has the reputation of being one of the best shipbuilders on the Pacific coast.

Senator NELSON. Are there any other shipbuilding yards in your town?

Mr. RHODES. Yes, sir; there are four others.

Senator NELSON. Are they wooden or steel yards?

Mr. RHODES. There are three wooden yards, I believe, and one steel yard.

Senator NELSON. Have they Government contracts, too?

Mr. RHODES. Two of them have Government contracts and are building the same type of a ship we are. One of them is the Todd Shipbuilding Co., and I understand are building steel ships; I do not know whether they have Government contracts, but I believe they have. The other is the Foundation Co., which are building for the French Government. The Foundation Co., I understand, have 12 boats under construction. They have not been limited to the price of lumber or the price of other materials and labor, and they have entered our market and paid a higher price; they have overbid us.

Senator NELSON. A higher price than the Government?

Mr. RHODES. Yes, sir.

Senator NELSON. For the lumber?

Mr. RHODES. Yes, sir.

Senator NELSON. How about the labor?

Mr. RHODES. I think they are working pretty close to the scale on labor.

The CHAIRMAN. Is there an ample supply of labor there?

Mr. RHODES. We have no trouble at all in securing all the labor we require, Senator.

The CHAIRMAN. All these other yards have got plenty of labor?

Mr. RHODES. I do not think they have had any trouble. We have to break in our labor and make shipbuilders out of them. They are mostly house carpenters and bridge carpenters. They have been building a cantonment at Cape Lewis and that has brought in a tremendous lot of bridge carpenters and house carpenters. They are nearly through with work now, and naturally that has brought them right to our yards. We can secure plenty of labor.

Senator NELSON. What do you have to pay ship carpenters?

Mr. RHODES. The present scale is $6 for ship carpenters.

Senator NELSON. $6 a day?

Mr. RHODES. Yes, sir.

Senator NELSON. For eight hours?

Mr. RHODES. Yes, sir; subject now to that bonus, which makes it $6.60.

Senator NELSON. What do you pay for ordinary laborers that are not really ship carpenters, but that you employ in the yard?

Mr. RHODES. I think that is $3.50. I will not be sure about that [referring to paper]. Ship carpenters, $6; house carpenters, $5; common laborers, $3.25.

Senator JONES. Is that scale fixed by the Government?

Mr. RHODES. It is fixed by the Government; I took it from their files.

Senator NELSON. That is the Government scale?

Mr. RHODES. It is the Government scale?

Senator JONES. How do you expect to build these additional ships that you want contracts for?

Mr. RHODES. If we could secure contracts for eight of those ships, we would immediately lay down two more ways, and we would start two of them at once, or within 30 days; in fact, we have started on two ways and are now constructing them. We would lay the keels of those within 30 days of the signing of the contract. By July we expect to have, or, any way by August 1, one of our ways cleared of the present contract, and then each one following right along; and we would begin laying keels on those, and our program is set so that we could take on contracts for eight more, and deliver them all within the year 1918.

Senator JONES. All within this year?

Mr. RHODES. Yes, sir.

Senator JONES. If you do not get those additional contracts, you will deliver simply four ships?

Mr. RHODES. That is all, and our plant will then be idle.

Senator JONES. You do not ask the Government to advance any money to expand your ways?

Mr. RHODES. No, sir; we are not asking for a cent.

Senator JONES. All you ask is the contract for the building of ships and you will furnish the means to do it?

Mr. RHODES. That is all we are asking, a straight business contract, and we have figured as close as it is possible for us to figure, with the facts before us. Some facts are unknown. We would be perfectly willing to turn our plant over to the Government to operate at any per cent they say. Our people have gone into this from a patriotic viewpoint; they are inspired to help the Government, and it was through the survey that was made by the Shipping Board that inspired our people to go into this business. We all put up our money and are ready to put up more, if necessary, and we are willing to operate and want to operate economically. We want to turn out first-class work; we will not turn out anything else. And if our prices seem high we are perfectly willing to step aside and let the Government take our organization and pay us any per cent they want to—it does not make any difference; they can fix the percentage. There is not a person in our company drawing a cent salary. I am president of it, and I have not drawn a 25-cent piece and do not expect to.

Senator JONES. And you do not figure in salaries in figuring the price of a ship?

Mr. RHODES. Not a stockholder will have a cent salary, with the exception of our general manager, who has some stock. Of course, he gives his entire time to this business. He is the only man, outside of our superintendent, who is drawing a salary which could be considered an official salary in any shape, manner, or form. There is not a shop in the country to-day operating more economically, I believe, than is ours.

Senator NELSON. That is very creditable.

Senator JONES. Has there been any complaint on the part of the representatives of the Shipping Board with reference to your work, its speed, or character?

Mr. RHODES. We have had no complaints, practically, from the Shipping Board.

Senator JONES. When you say you have had "no complaints, practically, from the Shipping Board," do you mean there have been some complaints?

Mr. RHODES. No; we have not had complaints. I speak only for this reason, that the statement was made that preference would be given to the yards that could produce the first launching, from now on.

Senator JONES. Who made that statement?

Mr. RHODES. I think Mr. Hayworth.

Senator JONES. Was that statement made to you?

Mr. RHODES. That statement was made to me.

Senator JONES. By Mr. Hayworth?

Mr. RHODES. Yes, sir.

Senator JONES. What led him to make that statement?

Mr. RHODES. I do not know, unless it was that I was endeavoring to find out if we would receive favorable consideration. I can not tell you exactly, Senator.

The CHAIRMAN. Are the other yards ahead of you on their work?

Mr. RHODES. There are some yards who could make launching one or two days ahead of us. I do not think there are any yards who could launch eight boats in the same given length of time that we can.

The CHAIRMAN. You only have four boats contracted, as I understand it?

Mr. RHODES. We have four boats contracted for. We are asking for contracts for eight more. We would like to fill our yards to their full capacity, in order to work efficiently.

Senator JONES. If you get that contract, as I understood you to say a while ago, you could launch all 12 of them during this year?

Mr. RHODES. We figure we can; yes, sir.

Senator NELSON. Let me ask you this: Could you expedite your work by working your men three shifts the whole 24 hours? Have you the facilities so you could do that?

Mr. RHODES. Yes, sir; we could do that. I think two shifts would be more efficient than three shifts, Senator.

Senator NELSON. Could you get the men for two shifts?

Mr. RHODES. Yes, sir; we could get the men.

Senator NELSON. And you could hasten the construction of these ships, could you not, a good deal?

Mr. RHODES. Yes, sir; we could. Under the labor arrangement there would be another additional 5 per cent for the men who work nights.

The CHAIRMAN. Do you have the housing problem?

Mr. RHODES. Our particular yard has no serious difficulty in that. We are taking care of our men for lunch with a restaurant, and so on, and we expect to put up a bunk house. We are only awaiting the approval of the Government to erect them.

The CHAIRMAN. What is the size of your plant?

Mr. RHODES We cover 35 acres.

The CHAIRMAN. All on high ground?

Mr. RHODES. High ground, solid ground, filled land.

The CHAIRMAN. How much water?

Mr. RHODES. A little over 1,200 feet water front; all water.

The CHAIRMAN. What is the depth of the water?

Mr. RHODES. I do not remember, but I know a boat disappeared there one night and they never have found it.

Senator JONES. They never have found it?

Mr. RHODES. They have never gone deep enough to find that.

The CHAIRMAN. You are right on deep water?

Mr. RHODES. Yes, sir.

Senator NELSON. Probably 100 feet deep?

Mr. RHODES. Yes, sir.

Senator JONES. Do you state that Mr. Hayworth made the statement that they would let contracts to those people who made launching first and also limit the contracts for these ships?

Mr. RHODES. I did not put it that way. Of course, I was not speaking for the other fellow. We were very solicitous about receiving contracts for our own company.

Senator JONES. Is it not your idea that we ought to get all the ships that we can get now?

Mr. RHODES. My idea, Senator, is just this, if I may be permitted to make a short statement: Early in this war program word came over from England and went the rounds that the United States could play a great part in this warfare by assisting in building the ships to carry the food, supplies, and munitions. It was said that it was up to the United States to do what they wanted—the "United States to produce ships, more ships, and still more ships"—I think that is the word that went all around the country. Soon after that time I believe the Shipping Board was formed, and a survey was made of the Pacific coast. Meetings were held in the various commercial clubs and people were asked to attend those meetings. I attended them, members of our company attended those meetings, and we were inspired with the idea that we could assist the Government if we would put our money and our time and what efforts we could back of this shipping program. They passed favorably upon the Puget Sound district for a boat-building district; they passed favorably upon our fir lumber, and everything seemed to be favorable for a program of continuous shipbuilding for a number of years. We then formed our company and went into the game.

In respect of the mills and delivery of lumber the Pacific Coast Lumber Manufacturers' Co. or sawmill—I do not know the exact style under which they operate—committed themselves to furnish enough lumber for 100 boats to the Government a year. The Govern-

ment finally, or the Shipping Board finally, covered for 40 and took up options for 60 more. They have never exercised their options for the additional 60 ships, as I understand it.

Senator JONES. Did you have any options?

Mr. RHODES. No, sir; we never had any options. We placed our order with the St. Paul & Tacoma Lumber Co., and they never had a definite order placed through the emergency board to fill that order.

Senator NELSON. Your company is not interested in any lumber mills or interested in any lumber companies?

Mr. RHODES. No, not at all; but one of our company happens to be a member of the lumber company, just one.

Senator JONES. That is Maj. Griggs?

Mr. RHODES. Yes, sir.

Senator JONES. Of the St. Paul & Tacoma Lumber Co.?

Mr. RHODES. Yes, sir.

Senator JONES. One of the biggest lumber companies on the coast?

Mr. RHODES. Yes, sir; one of the biggest.

The CHAIRMAN. How far does the lumber have to come?

Mr. RHODES. We are connected with the St. Paul & Tacoma Co. by an industrial electric railway of about 4,000 feet from our yard. The lumber is sawed in that mill, loaded onto electric cars, and conveyed immediately to our shipyard.

The CHAIRMAN. Where do the logs come from?

Mr. RHODES. The logs come from up in the mountain and other districts adjoining the Sound. They can get logs both by water and rail. They own a lot of logging land.

The CHAIRMAN. Within what distance?

Mr. RHODES. I should judge about 20 or 30 miles, and possibly 40.

The CHAIRMAN. Is it heavy timber?

Mr. RHODES. The heaviest kind of timber and the very best kind of timber. They are ready to extend their railroads further into the woods and mountains if they are given—or the call is made for more ship lumber. I have a letter from the lumber company that bears directly upon these questions you are asking.

The CHAIRMAN. Just proceed with your statement.

Mr. RHODES. I would like to read a little section of that, because it states it so much better than I can. I have it here; it bears right upon that matter:

(The letter referred to was subsequently furnished by Mr. Rhodes and is here printed in full as follows:)

WASHINGTON, D. C., *January 5, 1918.*

Mr. HENRY RHODES,
President Tacoma Shipbuilding Co., Tacoma, Wash.

DEAR SIR: In view of the fact that you are now contemplating the purchase of additional lumber for the construction of wooden ships, we wish to call your attention to the manner in which the wooden-ship building program has been handicapped since its inception.

When the St. Paul & Tacoma Lumber Co. contracted through the fir emergency committee, with the Tacoma Shipbuilding Co. for the four units which you are now building, we endeavored to secure protection in the supply of ship material by securing assistance from other mills who are members of the fir emergency committee, and were under contract to supply certain units to the Shipping Board. As the Shipping Board had at no time placed definite contracts with the fir emergency committee, it was impossible to secure the assistance we required. We were compelled to go into the open market and buy such material as we could not furnish ourselves, and we then found that the average

price which had been submitted by the fir emergency committee to the Government could not be protected. We did not receive a complete schedule ourselves at any time which would warrant us in purchasing the logs or making definite contracts for your requirements. We understand this was due to the fact that the Tacoma Shipbuilding Co. did not receive definite advice from the Shipping Board covering the detail specifications for their ships in sufficient time to place the business with the mills. The entire requirements of these four ships which we have supplied have been placed with us from day to day, almost as the construction demanded.

I maintain that this is unfortunate, and the continuance of this policy will not secure the amount of lumber required by the Government for its elaborate shipbuilding program. Some definite schedule should be adopted and adhered to, and definite orders placed through the West Coast Emergency Bureau, who will redistribute these specifications with the mills who are able to get out the same. I recall distinctly that the West Coast Association committed itself to supply 100 ships. The Government placed a blanket order to supply 40 ships and took an option on 60 which was never exercised. I think Mr. Long, chairman of the West Coast Emergency Bureau, advised me that his committee has never yet received a definite order from the Shipping Board. The supply of shipbuilding material was left entirely to the contractors themselves, to buy wherever they saw fit and at prices which they could secure. As an average price of $35 had been figured on a definite specification, various items on these specifications were listed from the lowest to the highest figure. We soon found that while contractors had been able to purchase various items on this list below the average they were unable to secure the more difficult and longer lengths without paying a premium. The average price made by the bureau on the specifications submitted was easily $5 per thousand under the going market at that time.

It is indeed unfortunate that the Shipping Board did not assume control of the entire lumber buying for at least 100 ships and protect the contractors to that extent. We are to-day confronted with the difficulty of supplying to the Shipping Board the longer and larger lengths required for construction of ships in the South and East, and recently an order has been placed on the coast for approximately forty million of the shorter lengths and smaller sizes. This is the first order that we have had on the coast which will absorb a sufficient percentage of the product of our mills to secure anything like dispatch.

The company which I represent has made elaborate connections to the Tacoma shipbuilding plant and has increased its facilities in cutting long timbers by the construction of a new mill, which added capacity gives us a daily capacity, in 10 hours, of 300,000 feet per day. With sufficient logs we could operate both day and night. It is our intention to give preference to all Government orders, and judging from our past experience, unless logs are especially secured, we are not able to supply from our daily cut in excess of 10 per cent of the cut applying on ship lumber and aeroplane stock. Our mill is particularly fortunate in being able to secure logs by water and by rail, and we presume, if definite contracts were placed with a mill located as ours is, that logs could be selected so that possibly 30 per cent to 40 per cent of the cut would apply on Government orders. The specifications would have to include both long and short lumber, however, and aeroplane stock.

Our company is in a position to open up additional timber which we are confident would increase the percentage of long lengths and clear logs, but unless definite contracts are secured we would not be warranted in going to additional expense in building railroads into this timber. We assume that there are many other plants similarly situated. Where logging is conducted as it is in the West, by use of geared locomotives and over steep railroads running from 3 per cent to 12 per cent grades, the expense of operation is very considerable, and the outlay in opening up timber requires at least three or four months to plan. If you assume that the total capacity of the sawmills on the west coast in the States of Washington and Oregon is approximately 5,000,000,000 feet, including all rail and cargo mills, it is fair to state that these mills could average approximately 10 per cent of their cut on ship material and Government orders. If the Government could place with the west coast mills some of the shorter lengths, this percentage could readily be increased. It is true that in cutting long logs we generally figure that about one-third of the log capacity goes into the long lumber, the side lumber and the defects in the timber generally accounting for the accumulation of the balance in shorter lengths. In cutting aeroplane stock the very best of our lumber is utilized; and if the butt logs are taken for aeroplane logs, the cut of long timber is vitally affected.

Now that the Government has practically commandeered the capacity of all these mills—and there are some 600, as I recall it—it seems to the writer that provided they will place their orders at once through the proper channels they will have no difficulty in securing all the lumber necessary to meet the building program outlined. I have seen long logs stored in salt-water booms, held in reserve by a mill, awaiting definite advice from the shipping board as to contracts which were never received, and finally disposing of the long-length logs through other orders where shorter lengths would have applied to save them from the ravages of the teredo.

With the serious labor conditions confronting us as they have in the past six months, it is little short of a crime to take the long timber so necessary for ship material and cut it into short-length orders when the logs can not be replaced under six months.

It does not seem to be generally known by the Shipping Board that the capacity of the sawmills on the west coast is sufficient to cut lumber for 100 ships and more. What we require is definite specifications suitable to the timber in which we are operating and support from the Government in operating our plants and logging camps. We are now confronted by the worst conditions of winter, but even under these conditions we can operate our logging camps if protected from I. W. W. influences and allowed to secure the men so necessary to bring our operations up to their rated capacity.

The Pacific coast, as you well know, has the greatest stand of timber on the American Continent to-day suitable for long, large lengths and for aeroplane stock. One can not be secured without the other in our operations, and the necessity of going into the timber for one quality of log will assist in securing the other. It is therefore important that the requirements for ship material and aeroplane stock be centered through one authority and the purchasing by the Government of these supplies be centered through the emergency bureau or some competent executive authority that represents the Government departments in such a way that specifications will not be continually changed, and if placed sufficient time be given the plants and operators to arrange for the dispatch so necessary in winning this war.

My own company has spent a large amount of money during the past six months in equipping itself in the woods as well as in the plant, as before stated, and the entire rescurces of this company are at the beck and call of the Government. I feel that I am echoing the sentiment expressed by the large majority of the manufacturers on the coast and am confident that if we can secure better cooperation in the placing of these orders there will be no cause for complaint. It is only necessary to call your attention to the fact that the fir emergency committee handled approximately 40,000,000 to 45,000,000 feet of cantonment lumber during the most strenuous strike conditions and never delayed the construction of this cantonment one day. Lumber was received at the rate of 20 to 30 cars a day, and I believe the same condition will apply on ship construction if some of the suggestions I have submitted are carried out.

Yours, truly,

E. G. GRIGGS,
President St. Paul & Tacoma Lumber Co.

The CHAIRMAN. How many wooden ships has the Government let contracts for now on the west coast?

Mr. RHODES. I could not tell you, Senator. I do not know. I think it is somewhere between 40 and 50—that is, prior to this last letting of contracts.

Senator JONES. And these lumber people agreed to supply lumber for 100 ships?

Mr. RHODES. Yes, sir. They can do that year after year, and they can get aeroplane stuff out at the same time, because one goes with the other.

Senator NELSON. You mean the lumber people—you do not mean this one company only, but you mean all the lumbermen on the coast?

Mr. RHODES. It is an association having about 600 mills altogether.

Senator JONES. Now, Mr. Rhodes, do you know of any reason why, if we want all the ships we can get, the Shipping Board should not

let contracts to those who can launch ships first and to every other company who shows its ability to fulfill contracts?

Mr. RHODES. I think there is every reason why they should do so.

Senator JONES. Has there been any intimation by the Shipping Board that they were only going to let contracts for a limited number of wooden ships?

Mr. RHODES. I have been told that they expect to let only 15 more at the present time.

Senator JONES. How did you get that information?

Mr. RHODES. From the Shipping Board.

Senator JONES. Who told you that, do you remember?

Mr. RHODES. I think it was Mr. Underwood, of the contract division.

Senator JONES. When did you get this information from him?

Mr. RHODES. Yesterday.

The CHAIRMAN. That is the whole number—15—for all over the country or just the west coast?

Mr. RHODES. Just for our district—15—from the way he spoke. My impression was that this letting of these contracts at this time first called for some thirty-odd boats, and I presume some have been let, and yesterday there were 15 still to be let.

Senator JONES. Now, Mr. Rhodes, I want just to revert a moment to the matter of the cantonment labor. How many men were employed at Camp Lewis cantonment, if you know?

Mr. RHODES. I have in my mind that there were something like eight or nine thousand; I heard that was about the number.

Senator JONES. Has that camp been completed, practically?

Mr. RHODES. It has been practically completed; they are doing some work there at the present time.

Senator JONES. So that most of these men are released from that work and available for other work?

Mr. RHODES. Yes, sir.

Senator JONES. And you do not anticipate you would have any trouble at all in getting an ample supply of labor for these additional ships in your yard?

Mr. RHODES. Not at all. We are turning men away every day.

The CHAIRMAN. Where is Camp Lewis located?

Senator JONES. About 17 miles from Tacoma.

Senator NELSON. Which way from Tacoma?

Mr. RHODES. South.

Senator JONES. Mr. Rhodes, what proposals have you had from other sources for the building of ships?

Mr. RHODES. I have had proposals from the Italians, from the French, and from brokers that I do not know who they represent.

Senator JONES. But not this Government?

Mr. RHODES. No; not this Government.

Senator JONES. What is the nature of those proposals?

Mr. RHODES. The proposals that I have had, most of them, were for a higher price than we are seeking to build for the Government or that we are receiving for our present contracts.

Senator NELSON. Were they not for smaller vessels?

Mr. RHODES. They will take the same vessels.

Senator NELSON. The same tonnage?

Mr. RHODES. The same tonnage; but they prefer a 3,000-ton boat, and some of them 2,500 tons.

The CHAIRMAN. Wooden?

Mr. RHODES. Wooden; and they will give us a contract if we will agree that we can deliver that boat to them when finished and have it transferred to the flag of its respective country.

Senator NELSON. If you will guarantee the Shipping Board will not take it?

Mr. RHODES. Yes, sir. We can not guarantee that; consequently we are not in a position to take the contracts even if we were anxious to take them.

Senator JONES. That is, you can not take those contracts?

Mr. RHODES. No.

Senator JONES. And you can not take any contracts for our own Government if they refuse to give them to you?

Mr. RHODES. That is right.

Senator JONES. In other words, if our own Government refuses to give you contracts, your shipping plant will be idle?

Mr. RHODES. The way it stands now, if we do not get these orders, our plant will stand idle July 1.

The CHAIRMAN. Under 2,500 tons they do not interfere?

Mr. RHODES. They do not give us definite assurances that we can build a boat and deliver it to the parties at that time, and that it can be transferred to their respective flags.

Senator JONES. And you would have difficulty in making satisfactory arrangements about getting material out of which to build even 2,500-ton ships?

Mr. RHODES. We are very much afraid we would have; we are afraid they would interfere with the stock material here and there. We have no assurance that that would not be done.

The CHAIRMAN. Have you heard any criticism, Mr. Rhodes, about the length of this Ferris type of wooden vessel?

Mr. RHODES. I am not a practical boat builder myself, Senator. I can only say what I have heard boat builders say, that it is a very expensive boat to build, on account of a lot of changes that have to be made in the construction of the boat. The boat can be built that length or even a shorter length than that for considerably less money that would pass the American Bureau or Lloyds, and be perfectly satisfactory, and is satisfactory for a regular shipping man.

Senator NELSON. The same tonnage?

Mr. RHODES. Yes, sir. I will say this: There has been in the neighborhood of 300 changes made in the Ferris type of boat up to date.

Senator NELSON. How many?

Mr. RHODES. Three hundred. I am informed by our superintendent there has been about 300 changes made in that boat up to date.

Senator FERNALD. How many changes have been made since you took the contract?

Mr. RHODES. That is the number.

The CHAIRMAN. Have those changes interfered with you?

Mr. RHODES. Some of those changes, a good many of them, have been improvements, and where they have reached us before we laid out our work there has been no interference, but where they have been reached afterwards and we have been compelled to change, naturally

there is interference, but, in all justice to them, I do not think they have compelled us to make many changes. Where we had already passed and proceeded along, and the change came after, they did not require us to go back and make it according to the changes they had sent out.

The CHAIRMAN. I had a letter from a gentleman who seems to have had a good deal of experience in building boats, and he insists that these boats are rather too long; he recommends dimensions as 274 feet in length, 57 feet beam, 27 feet depth of hold, as being about as big a wooden ship as we ought to undertake to build.

Mr. RHODES. How much beam was that?

The CHAIRMAN. Two hundred and seventy-four feet in length, 57 feet beam, 27 feet depth of hold.

Senator NELSON. That is a bigger beam than these.

Mr. RHODES. Yes, sir.

Senator NELSON. Yours were 46 feet.

Mr. RHODES. I was wondering if they could not be mistaken and mean 47.

Senator NELSON. It would be more like a washtub.

The CHAIRMAN. His idea is that these were too long, and that they made it rather difficult to get shape, and that a long boat would, perhaps, wear out quicker than one of these compact ones, such as he mentions.

Senator NELSON. I am not a shipbuilder, but it seems to me a proportion of 275 feet in length to 57 feet beam would be a queer kind of a ship.

Mr. RHODES. That is not in accordance with most of the specifications submitted.

The CHAIRMAN. What is the length of beam?

Mr. RHODES. Two hundred and twenty-one feet 6 inches.

Senator JONES. I think that is all I want to ask Mr. Rhodes unless he has some suggestion or further statement to make.

The CHAIRMAN. I believe that is all, Mr. Rhodes.

Senator JONES. I want to say to the chairman that I would like to have Mr. Underwood, or Mr. Hayworth, or somebody from the Shipping Board come here who can tell what the policy of the board is going to be with reference to wooden ships.

The CHAIRMAN. I think Mr. Hayworth is the man you want.

The committee will now go into executive session.

(The committee thereupon, at 4.30 o'clock p. m., proceeded to the consideration of executive business, upon conclusion of which, at 5 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. tomorrow, January 18, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, JANUARY 18, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Ransdell, Shields, Martin, Bankhead, Nelson, Jones, Harding, Calder, and Johnson.

The CHAIRMAN. Gentlemen, we have present this afternoon Mr. Heyworth, of the Emergency Fleet Corporation.

Mr. Heyworth, will you state your full name and your position?

STATEMENT OF MR. JAMES O. HEYWORTH, MANAGER OF DIVISION OF WOOD-SHIP CONSTRUCTION, EMERGENCY FLEET CORPORATION.

Mr. HEYWORTH. My name is James O. Heyworth. I am manager of the division of wood ship, composite ship, and concrete ship construction.

The CHAIRMAN. Of the Emergency Fleet Corporation?

Mr. HEYWORTH. Yes, sir; the Emergency Fleet Corporation.

The CHAIRMAN. What is your residence?

Mr. HEYWORTH. Chicago.

The CHAIRMAN. What was your business before you became connected with the Emergency Fleet Corporation?

Mr. HEYWORTH. Engineering and contracting, for the last 22 years.

The CHAIRMAN. Were you connected with any particular company there, or were you in business simply on your own individual account?

Mr. HEYWORTH. In my own name. Formerly the firm was Christy, Lowe & Heyworth. We operated then in the South. We put in the harbor at Port Arthur, Tex., and also at Fernandino, Fla., and the three locks and dams on a memorable river called the Warrior River, in Alabama.

The CHAIRMAN. Yes; Senator Bankhead will probably remember about that river.

Mr. Heyworth, we wanted to make some inquiry about the purpose of the Emergency Fleet Corporation with reference to ship construction, and particularly with regard to the plans and ideas of the corporation, and of your office, with reference to continuing the building of wooden ships?

Mr. HEYWORTH. Contracts for 401 wooden ships have been let; 58 composite ships. Day before yesterday, in conference with the

contract department, we practically located for immediate contract 45 and 15—that would make 60—but I think it really was 59 more ships.

Senator RANSDELL. Of what kind?

Mr. HEYWORTH. Wooden.

Senator RANSDELL. I do not quite understand what you mean by a "composite" ship.

Mr. HEYWORTH. Well, that is a steel and wood ship; the frame of steel and the planking of wood.

The CHAIRMAN. Do you mean to say that you have contracts for 401 wooden ships already let, plus some more that you have——

Mr. HEYWORTH (interrupting). Yes, sir.

The CHAIRMAN. Plus how many more?

Mr. HEYWORTH. About 60; 59 or 60.

The CHAIRMAN. And those were let very recently?

Mr. HEYWORTH. Well, the idea is to let those very shortly.

The CHAIRMAN. Oh, you have not actually signed the contract for those yet?

Mr. HEYWORTH. No, sir.

The CHAIRMAN. Those are still pending?

Mr. HEYWORTH. Those are under my immediate consideration for building.

The CHAIRMAN. Are you confining those to any portion of the country, either the east coast or the west coast?

Mr. HEYWORTH. It is spread over the west coast and the southwest coast, the Gulf and the Atlantic coast, up to Maine, according to the capacity of the best yards that are in the best shape physically and have the experience to produce ships in the quickest and most satisfactory manner at this time.

The CHAIRMAN. How many composite ships did you say?

Mr. HEYWORTH. Fifty-eight.

The CHAIRMAN. That have already been contracted for?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Either Mr. Hurley or Mr. Piez, according to my recollection, said that they did not propose to go on with any more composite ships.

Mr. HEYWORTH. I could not answer as to that.

Senator BANKHEAD. None of those ships that you are contemplating immediate contracts for are composite ships, are they; they are all of wood?

Mr. HEYWORTH. No; they are all of wood.

Senator RANSDELL. Are those ships that you are now contemplating of the same dimensions as the former wooden ships or are they smaller or larger?

Mr. HEYWORTH. Of standard Ferris type.

The CHAIRMAN. Three thousand five hundred tons.

Mr. HEYWORTH. Just the same as heretofore under construction, namely, 3,500 tons dead-weight—some 4, 000 tons.

Senator RANSDELL. Has the Fleet Corporation had in contemplation the making of any of the smaller ships?

Mr. HEYWORTH. Not since I have been in the office—it may be.

Senator RANSDELL. I understood that some of the southern mills were suggesting the propriety of smaller ships, as they could get some of the timbers out very much more readily for the smaller ships. Do you know anything about that?

Mr. HEYWORTH. That question has been up, but not in that light. The idea is to plan a ship that will have the same carrying capacity in which smaller sized timbers may be used. Mr. Ferris has a type of ship of that character, which is practically the same as this ship.

Senator RANSDELL. But which permits the use of smaller timbers?

Mr. HEYWORTH. Yes, sir; and that ship is well thought of by the experienced shipbuilders on the west coast, and also by those on the Maine coast, who are reliable in their opinions.

Senator JONES. Do you have anything to do with determining the policy of the Emergency Fleet Corporation with reference to the building of wooden ships?

Mr. HEYWORTH. I believe they would confer with me and ask my opinion on that.

Senator JONES. Well, do you have anything to do with determining what the policy shall be, as to whether you will build lots of them, or none?

Mr. HEYWORTH. I have not.

Senator JONES. You have nothing to do with that?

Mr. HEYWORTH. No, sir.

Senator JONES. Who has to do with that?

Mr. HEYWORTH. I do not know.

Senator JONES. Well, there must be somebody down there to determine what the policy will be. You do not know who it is?

Mr. HEYWORTH. I should think that it would be a matter of the opinion of Mr. Hurley, of the Shipping Board, Mr. Piez, and all his aids in arriving at possibilities to build ships in the best places to meet the supply of lumber that could be got easily and quickly, or, in some instances, it would not be policy to build ships where you could not get the lumber, or where the conditions were congested.

Senator JONES. Well, is there any plan of not building ships where they can be built?

Mr. HEYWORTH. Not that I know of at this time.

Senator JONES. Well, would you have anything to do with determining that?

Mr. HEYWORTH. I think they would ask me for my recommendations on where ships could be built the quickest and by the most experienced builders.

Senator JONES. Well, if a yard that has contracts for the Shipping Board is prepared to expand its plant and to agree to build more ships within this year, and has the financial ability to do so, is there any policy of the board that would preclude letting contracts to such a company?

Mr. HEYWORTH. I could not answer that question with any knowledge.

Senator JONES. Well, who could answer it?

Mr. HEYWORTH. I could not tell you that.

Senator JONES. Mr. Chairman, those are the things that I want to find out.

Senator BANKHEAD. Well, I should think Mr. Hurley or some member of the board itself would be the one to ask.

The CHAIRMAN. I should think either the chairman, Mr. Hurley, or Mr. Piez, the general manager, would be the one to ask that question.

Senator JONES. Well, whoever can answer those questions is the one that I want to come before the committee.

The CHAIRMAN. Mr. Heyworth, are you posted in regard to the supply of material for building ships? Have you inquired into that?

Mr. HEYWORTH. I have operated all over the United States, and have especially endeavored to find out the supply of material possible for these ships since I have been in the office here—and I have been in active work about five weeks. To what do you refer, exactly, in asking that question, Mr. Chairman?

The CHAIRMAN. Well, I was leading up to this: If you had inquired into that situation, I wanted to know whether you agreed with Mr. Sanford, of the Southern Pine Emergency Bureau, that there was an ample supply of material for the building of all the ships that had been contracted for, and even more?

Mr. HEYWORTH. My general information on that subject would be about as follows: The very large trees do not grow, frequently, in a tract of timber land in all sections of the South; the mills could not get them out as rapidly as they could the rest of the timber that they were cutting; it might be much more expensive to get out large timbers rapidly enough to supply the demand and keep the ramps of the mill free of the smaller sizes, and that might retard the shipment of the larger sizes, which, unfortunately for production, are the first timbers needed in a boat.

Senator BANKHEAD. Well, would your general knowledge of the conditions on the Atlantic coast lead you to conclude that there was, or that there was not, sufficient large timber that could be handled and gotten out to supply the demand for these ships?

Mr. HEYWORTH. I think the large timbers do not grow in sufficient numbers in the timber that they are cutting to enable them to keep up the early shipments necessary for this production as a whole. It should have been supplanted by fir from the West in the beginning, and thus brought about more rapid production.

The CHAIRMAN. But is it your view that the possible output of the mills in the yellow pine region could not equal the requirements for contracts already let?

Mr. HEYWORTH. In what space of time?

The CHAIRMAN. In any one year. I think the statement was made by some one who appeared before the committee that, taking the entire output of the mills, contracts have already let for more material than they can furnish in one year.

Senator BANKHEAD. Do you mean the large timber, Mr. Chairman?

The CHAIRMAN. Well, all sorts.

Senator NELSON. You might confine that to the Gulf and the Atlantic coast, Mr. Chairman.

The CHAIRMAN. Yes; the yellow pine section.

Mr. HEYWORTH. Getting out the large timbers and the large trees would necessitate the moving of a very large amount of small timbers.

The CHAIRMAN. But the timber is there for more than you have contracted for?

Mr. HEYWORTH. I should not think it was there, in the manner required for the rapid production of ships.

The CHAIRMAN. That is, for some of the large timber, such as you would use the Pacific coast fir for?

Mr. HEYWORTH. Some of the large size timbers.

The CHAIRMAN. Well, you are supplying timbers now from the Pacific coast?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. And with the large timbers supplied from the West coast, there is scarcely any limit to the amount of timber you can get from the yellow pine region?

Mr. HEYWORTH. If you can get it fast enough; the mills can not get these heavy timbers out fast enough for rapid ship production, because all the timbers used in the early stages of ship construction are big timbers; the smaller timbers do not come until you get your frame all up.

Senator HARDING. Have there been any changes in the specifications to accommodate the timbermen?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. What timbermen?

Mr. HEYWORTH. I am only speaking of the timbermen as a whole.

Senator JOHNSON. Well, that is what I mean; producers of what? I did not mean for you to give the names of individuals.

Mr. HEYWORTH. Oh, the southern pine producers.

Senator JONES. Have you ever had any experience in shipbuilding?

Mr. HEYWORTH. I have built barges up to 1,000 tons and small barges in river and harbor work.

Senator JONES. I mean, have you had any experience in building merchant ships for coastwise or oversea trade?

Mr. HEYWORTH. No, sir.

Senator JONES. And you do not claim to have any practical knowledge with reference to that class of construction?

Mr. HEYWORTH. Except from observation; no, sir.

Senator JONES. I want to ask you this, Mr. Heyworth: Has there been any attempt made by the Shipping Board and the branch of the Army which has charge of getting out spruce for aeroplanes, or fir for aeroplanes, to coordinate the work?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Has anything been done along that line?

Mr. HEYWORTH. Yes, sir; Mr. Richard Howe, of the Aircraft Production Board, was joined by Mr. Wood Beale, of J. B. Lacey & Co., large timber factors, and they are now on the Pacific coast trying to decide upon some man who has knowledge, experience, and ability enough to assist in taking advantage of and getting a large production of timber from the west coast for both the Army and the Shipping Board.

Senator JONES. Well, they ought not to have very much trouble in finding men of that kind out on the Pacific coast, and it ought not to take very much time to do it.

Mr. HEYWORTH. They were delayed, I should say, three or four days by this big blizzard; but I understand that they are now either there or about to arrive there.

Senator JONES. I am glad to know that, because it seems to me that they ought to work out some plan in that way, not only to get out the ship timbers, but also those aeroplane timbers; and this would be in line with your suggestion a few moments ago, that in getting out these large timbers there is a great deal of small timber that must be cut, and unless it is used for some purpose like the aeroplane work it is simply wasted. But it can be gotten out at the same time. I am very glad indeed to know that they are trying to do that.

Mr. HEYWORTH. They undertook to do that.

Senator NELSON. I understand that they prefer spruce timber to any other timber for aeroplanes.

Mr. HEYWORTH. I would not like to say what are the reuqirements for aeroplanes, because I do not know what they are.

Senator JONES. I understand that they are also using fir; I do not know much about it.

Mr. HEYWORTH. Very large quantities, I believe.

Senator JONES. That is what I understand, that they are using very large quantities of fir as well as of spruce.

Senator NELSON. Mr. Heyworth, I was not present when you began your statement. How long have you been with the Shipping Board?

Mr. HEYWORTH. I was called to Washington in November, but I did not take hold until about five weeks ago.

Senator NELSON. What are your functions with the board; what is the duty that you are specifically charged with under the board?

Mr. HEYWORTH. My title is, "Manager of the division of wood-ship construction, composite and concrete."

Senator NELSON. Then, you have charge of what you might call the inspection department; is that it?

Mr. HEYWORTH. I believe the purpose is to help find and devise ways and means whereby the production of these ships can be helped; whereby the contractors can be met in a fair and equitable and reasonable manner and assisted to the best of our ability. In other words, if we are going to produce ships, we have got to work right together on the same whiffletree with the contractors.

Senator NELSON. Then, your business is to look after and secure material, is it, for the ships?

Mr. HEYWORTH. No, sir; the purchasing department secures material for the ships.

Senator NELSON. You have nothing to do with the purchasing?

Mr. HEYWORTH. No, sir.

Senator NELSON. Then, do you have to do with the inspection department? Now, they have a local inspector at each yard to supervise the work as it goes on. Are those men under your jurisdiction?

Mr. HEYWORTH. Yes, sir. Each district has a district officer——

Senator NELSON (interposing). Then, you are simply at the head of what I might call the inspection department, to see that the work is properly carried out?

Mr. HEYWORTH. And the contracts fulfilled by both parties.

Senator NELSON. That is it. You have nothing to do, then, with formulating or entering into, or advising the entering into, of the contracts in the first instance?

Mr. HEYWORTH. Except that no contracts for wooden ships are awarded unless approved by the division of which I am the head.

Senator NELSON. What division or branch has charge of looking after the securing of materials for building purposes?

Mr. HEYWORTH. The purchasing department.

Senator NELSON. The purchasing department; and that you have nothing to do with?

Mr. HEYWORTH. No, sir.

Senator NELSON. Do you know whether the work of shipbuilding has been hampered by the lack of labor?

Mr. HEYWORTH. I should think not.

Senator NELSON. Have there been any strikes anywhere in connection either with the building itself, or in connection with supplying material for the building of ships?

Mr. HEYWORTH. I could not answer that as fully as the labor department could; they could give you much better information on that matter than I could.

Senator NELSON. Now, you have one or more inspectors under you at each of these yards where they are engaged in building, have you not?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. And they report to you?

Mr. HEYWORTH. Yes, sir; through the district officer.

Senator NELSON. Well, you have the country divided into 9 or 10 districts, have you not?

Mr. HEYWORTH. Eleven districts.

Senator NELSON. Eleven districts; and the local inspectors report to the district officers, and they report to you, is that it?

Mr. HEYWORTH. Yes, sir. For your information, I will say the organization has been divided, and now the steel in each district has its own district officer, and the wood in each district has its own district officer. So that the steel and the wood——

Senator NELSON (interposing). And they have separate inspectors too?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. The inspectors for wooden vessels and inspectors for steel vessels?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. Is that the case where the construction of both is carried on in the same yard, or in the same neighborhood?

Mr. HEYWORTH. Yes, sir; the two constructions are separate from the district officer right down through the whole organization.

Senator NELSON. Well, then, you have two sets of district officers too, do you, one for the steel and one for the wood?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Every district has two now?

Mr. HEYWORTH. Wherever there are the two forms of construction going on.

Senator BANKHEAD. I should think that would be necessary; because you would not find a man who knew anything about steel construction who would also be very efficient in wood construction; the two things are entirely different.

Senator NELSON. Both of those inspectors, whether of wood or of steel, report to you?

Mr. HEYWORTH. No, sir, only the wood inspector.

Senator NELSON. Only the wood; to whom do the inspectors of steel report?

Mr. HEYWORTH. I understand to Admiral Bowles.

Senator NELSON. So you are simply the head of the inspection force or division technically called the "construction of wooden ships"?

Mr. HEYWORTH. I judge that is about it.

Senator NELSON. And your business is to see that the contracts are executed and performed properly?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. And that the ships are built according to the specifications in the contract?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Who determines whether a contract will be made or not? Suppose I wanted to build wooden ships; I would take that up with the architect and get the plans, I suppose, and make a proposal. Now, who would determine whether a contract with me should be made or not?

Mr. HEYWORTH. The contract department.

The CHAIRMAN. Who is at the head of that?

Mr. HEYWORTH. Mr. Radford, I think.

The CHAIRMAN. Mr. Radford?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Have you any instructions to limit the number of wooden ships that are to be built on the Pacific coast?

Mr. HEYWORTH. No, sir.

Senator JONES. So that if a contractor comes to you and shows his ability to build ships and submits a satisfactory bid, you would recommend that contract?

Mr. HEYWORTH. I could not consider that unless they decided to build more ships.

Senator JONES. Unless who decided to build more ships?

Mr. HEYWORTH. The board.

Senator JONES. That is what I asked you a moment ago, as to whether you had any instructions that the number of wooden ships had been limited.

Mr. HEYWORTH. I had no instructions as to the number of ships continually, as I understood you.

Senator JONES. What instructions have you as to building wooden ships on the Pacific coast?

Mr. HEYWORTH. To build no more right now than are let or under pending contracts at this time.

Senator JONES. Who gave you those instructions?

Mr. HEYWORTH. Mr. Piez, and Mr. Radford of the contract department.

Senator JONES. When did they give them to you?

Mr. HEYWORTH. Oh, last week.

Senator JONES. Last week?

Mr. HEYWORTH. Yes.

Senator JONES. Well, then, that is the gentleman that I want to appear before the committee.

I want to ask you another question or two: You have a local man, for instance, on the Puget Sound section, to advise you with reference to contractors who want to build wooden ships, have you?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Who is that?

Mr. HEYWORTH. L. J. Wentworth, of the new district just organized—Oregon.

Senator JONES. Oregon and Washington?

Mr. HEYWORTH. No, sir; Oregon.

Senator JONES. Well, what about Washington? I asked you about Puget Sound.

Mr. HEYWORTH. Well, William Piggott has just been appointed to take charge of wood-ship construction, with the power to appoint his own technical man.

Senator JONES. Well, does that include a report by him upon those who want to get contracts, or is that kind of report made by Capt. Blaine still?

Mr. HEYWORTH. Capt. Blaine has nothing to do with the wooden-ship construction in the State of Washington.

Senator JONES. Now?

Mr. HEYWORTH. Now.

Senator JONES. That is, since the last week?

Mr. HEYWORTH. Yes, sir.

Senator JONES. That is what I wanted to find out.

Senator NELSON. Do you think it would be more advisable to expedite the completion of the vessels we have already under contract than to take on a lot more of new contracts, either wood or steel?

Mr. HEYWORTH. No, sir.

Senator NELSON. You still think we should keep taking on new contracts?

Mr. HEYWORTH. I think we should build wooden ships where we can build them without hampering the construction now under wav, or else permit somebody else to build them.

Senator NELSON. Well, you have absolutely stopped the building of wooden ships, except small vessels, for anybody else besides the Government, have you not?

Mr. HEYWORTH. I could not answer that question intelligently.

Senator JOHNSON. How is the program getting on building wooden ships, Mr. Heyworth?

Mr. HEYWORTH. That is a broad question.

Senator JOHNSON. Yes.

Mr. HEYWORTH. I have been in the harness about five weeks. I am no miracle worker. I think it is getting better every week. The policy, as promised by Mr. Hurley to the shipbuilders, in November, that we would meet them fairly and reasonably on adjustments and assist to get out the ships, has made them feel better; they are going at their work with more interest, and are beginning to realize the possibilities of wood-ship construction.

Senator NELSON. Are you taking any steps to expedite the construction by having extra shifts working?

Mr. HEYWORTH. Yes, sir; we are having extra shifts work in all yards that can or ought to, and I have authorized the district officers of wooden-ship construction to permit extra shifts.

Senator NELSON. Two or three a day?

Mr. HEYWORTH. No, sir; our policy is to have two shifts.

Senator NELSON. Of eight hours each?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Mr. Heyworth, you said you were no "miracle worker," and that the situation was "getting better." What did you mean by that? Was it very bad?

Mr. HEYWORTH. I mean that the design of the ships is more thoroughly understood by the builders, the supply of material is getting a little better, the organizations are getting better, and, as a natural result, together with the men knowing that they are to receive reasonably fair play in adjustments, has helped.

Senator JOHNSON. I do not fathom that. Was there any question at any time about there receiving otherwise than fair play?

Mr. HEYWORTH. No, sir; except that they were not getting the attention that they should have received.

Senator JOHNSON. Did that delay the program and disarrange it?

Mr. HEYWORTH. That is a question anybody can answer. If a man has any doubt about his adjustments or his future.

Senator JOHNSON. Oh, no; I am asking you because of your knowledge, that is all, if you know.

Mr. HEYWORTH. I should think it would delay the progress very materially; yes, sir.

Senator JOHNSON. From your connection with the particular work at the present time, have you been able to determine that the work was delayed and that there was disorganization and dissatisfaction?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Will you say whether or not, under the contracts for wooden ships that had been contracted for, those ships will be finished within the time limit?

Mr. HEYWORTH. You refer to the whole time limit of the whole fleet?

Senator JOHNSON. No; I did not look specifically at each wooden-ship contract. But did they not provide that the ships should be completed in a specific time?

Mr. HEYWORTH. I could not answer that question without being with the whole proposition a longer time.

Senator JOHNSON. Are you familiar with the individual contracts?

Mr. HEYWORTH. I am getting very largely so with many of them.

Senator JOHNSON. Would you prefer that I do not ask you about this detail because of the brief time you have been connected with the work?

Mr. HEYWORTH. Yes, sir; I think I could give you a much better answer some time in the future than I could now.

Senator JOHNSON. I have no desire to trouble you with questions the answers to which you are not familiar.

Mr. HEYWORTH. I would be very glad to answer you anything with respect to which I think I can give you an intelligent answer on.

Senator JOHNSON. In the course of time have you been to any of the wooden shipyards?

Mr. HEYWORTH. None at all.

Senator JOHNSON. None at all?

Mr. HEYWORTH. None.

Senator JOHNSON. You do not feel you could determine accurately whether the ships which have been contracted for would be completed within the time limit of the contract?

Mr. HEYWORTH. I could not do so at this time.

Senator JOHNSON. But you do feel, from the knowledge you have, that there has been delay and there has been disorganization in the wooden shipbuilding program?

Mr. HEYWORTH. Yes, sir; in the yards.

Senator JOHNSON. Those delays arose, first, because the material was not furnished when it should have been furnished, did they not?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Secondly, from what other cause?

Mr. HEYWORTH. Some delays were occasioned through changes in plans and specifications.

Senator JOHNSON. And I presume you are more or less familiar with the testimony that has been given here. Do you refer to the changes in plans that were made by Mr. Ferris?

Mr. HEYWORTH. I do not know whom it was made by.

Senator JOHNSON. Was more than one change in plans made?

Mr. HEYWORTH. I believe there have been two, and several minor ones.

Senator JOHNSON. Two that you would call major and several minor ones?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Of necessity those changes in the plans would cause considerable delay?

Mr. HEYWORTH. Yes, sir. One change required approximately 110,000 feet board measure more lumber to a ship.

Senator JOHNSON. Was that the change that was designed to strengthen the ship?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Senator, will you let him state the other major change?

Senator JOHNSON. Yes. The other major change, if you please, was what?

Mr. HEYWORTH. Specifications of machinery and boilers.

Senator JOHNSON. In your opinion, as an expert, were those changes essential?

Mr. HEYWORTH. I could not claim to be an expert shipbuilder. I understand from several shipbuilders of experience that the boat as originally designed would answer the purpose.

Senator JOHNSON. Your own opinion is that the changes were unnecessary?

Mr. HEYWORTH. My own opinion is that the changes would strengthen the boat, but that the boat was good-enough as it was.

Senator JOHNSON. And would answer all the requirements?

Mr. HEYWORTH. Yes, sir

Senator JOHNSON. So that if you personally had to do with the matter you would not have made the changes, would you?

Mr. HEYWORTH. No, sir.

Senator JOHNSON Did those changes alter in any very great degree the cost under the contract?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Let us take it as to one ordinary wooden ship of 3,500 tons, I believe.

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. What addition in cost would the major changes that you have suggested cause?

Mr. HEYWORTH. This is not for the record?

Senator JOHNSON. Yes, sir; it is.

Mr. HEYWORTH. We are negotiating a lot of adjustments and are trying to get these men all satisfied, each according to his own conditions and his own yard and his own troubles, and it would not be fair to those we have adjusted or those we are about to adjust for me to make some blanket statement here. I do not think it would. I leave it for you gentlemen's consideration.

Senator JOHNSON All right. I do not care to inquire into it, if that is your view. What are those adjustments—different in different instances?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Of necessity they have to be made so, because of the locations of the yards and the like?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. In each instance where those changes have been made, the additional cost in some fashion, by adjustments or otherwise, has been allowed to the particular builder?

Mr. HEYWORTH. Yes, sir; and is going to be allowed to those which have not yet been adjusted.

Senator JOHNSON. Can you mathematically determine exactly what the additional cost is?

Mr. HEYWORTH. Not mathematically; no.

Senator JOHNSON. Substantially?

Mr. HEYWORTH. Substantially; yes, sir.

Senator JOHNSON. You say the adjustments are in process of satisfactory determination at the present time, but they have not all yet been concluded, have they?

Mr. HEYWORTH. No, sir.

Senator JOHNSON. Very few have been concluded, indeed; is not that the fact?

Mr. HEYWORTH. No. In the last few weeks I should say adjustments covering over 75 or 80 ships have been cleaned up.

Senator NELSON. How many boats?

Mr. HEYWORTH. Seventy or eighty.

Senator NELSON. Have been adjusted?

Mr. HEYWORTH. Yes, sir.

Senator JOHNSON. Are any other changes contemplated?

Mr. HEYWORTH. I do not know.

Senator JOHNSON. Well, if they were contemplated you would know about it?

Mr. HEYWORTH. I think I would; I believe I would be consulted.

Senator JOHNSON. I understood you to say, in answer to Senator Jones in the last questions that he put to you, that there had been something said to you concerning the cessation of the policy of constructing wooden ships?

Mr. HEYWORTH. It was thought, due to lack of lumber in the present yards—that is, I mean by "lumber" heavy timbers—and a congestion in the railroads and lack of cars, that we had better stop wooden ships until that condition eased up.

Senator JOHNSON. Only until then?

Mr. HEYWORTH. I could not put it that way, because I have not received any instructions.

Senator JOHNSON. The Senator was inquiring, and I would like to know, whether, if you can tell us with any degree of definiteness, there has been any consultation and conference among you, the end of which was to cease the construction of wooden ships entirely?

Mr. HEYWORTH. I have not been present at any such conference.

Senator JOHNSON. Do you know whether any such have been held?

Mr. HEYWORTH. I would not know.

Senator JONES. Do I understand—and I want to be sure that I understand this—that you had been instructed a week ago that no more contracts on the Pacific coast for wooden ships would be let, at least at the present time?

Mr. HEYWORTH. Except these now pending contracts, Senator. As I told you a while ago, about 60 on the west coast and Gulf and Atlantic coasts are pending contracts.

Senator JONES. How many on the Pacific?

Mr. HEYWORTH. About 40 or 45, I think.

Senator JONES. There are about 40 or 45 wooden ships that you expect to let contracts for on the Pacific coast yet—there are applications pending that cover that number of ships, are there?

Mr. HEYWORTH. Yes, sir.

Senator JONES. And you have been instructed not to consider any additional applications?

Mr. HEYWORTH. Yes, sir.

Senator JONES. But you are expected to pass upon these applications?

Mr. HEYWORTH. Yes, sir.

Senator JONES. And make recommendations?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Now, then, I want to ask you a little about that. You know of the Tacoma Shipbuilding Co.?

Mr. HEYWORTH. Yes, sir.

Senator JONES. At Tacoma, Wash.?

Mr. HEYWORTH. Yes, sir.

Senator JONES. They have an application in for eight additional ships?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Have you considered the showing they have made?

Mr. HEYWORTH. Yes, sir.

Senator JONES. I am going to ask you, have you come to any conclusions?

Mr. HEYWORTH. No, sir.

Senator JONES. As to what should be allowed them?

Mr. HEYWORTH. No, sir.

Senator JONES. As I understand, they have four ships now under construction?

Mr. HEYWORTH. Yes.

Senator JONES. And these ships will all be off the ways by the 1st of July, and they are willing to put in additional ways and to enter into a contract to complete not only these four but these additional ships during this year. If they show their ability to do that and put in these additional ways at their own expense, do you not think it would be good policy for the Government to let them have them?

Mr. HEYWORTH. I am in favor of building more ships, as many as we need for war purposes; that number should be decided by all the demands of all the departments largely I think.

Senator JONES. There is no doubt but that we need every possible ship that we can get built this year, is there?

Mr. HEYWORTH. I agree with that.

Senator JONES. So that I take it, assuming that they can make the showing I have just stated, that it would be a wise policy to let them have the contract.

Mr. HEYWORTH. There are other——

Senator JONES. So as to get these ships. What were you going to say?

Mr. Heyworth. There are other good shipbuilders whose ways will become free during the coming spring and summer.

Senator JONES. If they are and they can build the ships this year, what reason is there for not giving them all the ships they can build this year—do you know of any?

Mr. HEYWORTH. No, sir,

Senator JONES. Well, I am glad to hear you say so, because we want the ships.

The CHAIRMAN. Is there any trouble about labor now in any of the yards?

Mr. HEYWORTH. No, sir; except one or two adjustments asked for. I would refer you to the labor department of the Shipping Board for any answers as to the labor.

Senator JONES. You are aware of the situation, for instance, at Tacoma?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Arising out of this fact, that during the last summer and fall there were some eight or ten thousand men used in the building of the Army cantonment at Camp Lewis; that that work is practically done now, and that those 8,000 or 10,000 men are available for other purposes, the chances are a great many of them being carpenters could be used in wooden shipbuilding?

Mr. HEYWORTH. In the construction of more ships than are now under contract, there should always be considered the possibility of the supply of machinery and boilers and other equipment. The field of that production can be ascertained, and that would largely limit the production of hulls, unless you could use the hulls without machinery as barges.

Senator JONES. Has it developed that you are limited in your supply of machinery?

Mr. HEYWORTH. I could not answer you that to-day. But, I understand from Mr. Browne, the purchasing officer, that we can get machinery for six or seven or eight months' delivery.

Senator JONES. It has not been brought to your attention, then, as a reason for not letting additional contracts for wooden ships that you would not be able to supply them with machinery?

Mr. HEYWORTH. That has been one of the considerations; how seriously it has been taken up I do not know.

Senator JONES. You have to determine that pretty quickly, would you not, when these applications for building ships come in?

Mr. HEYWORTH. The contract department would.

Senator JONES. And you would have nothing to do with that?

Mr. HEYWORTH. Not under the present régime.

Senator JONES. What is the extent of your recommendations; how far do you go in recommending the building of wooden ships, or the letting of contracts for the building of wooden ships?

Mr. HEYWORTH. If they have contracts under consideration they refer them over to the wood-ship division for approval as to the contractor and terms of contract.

Senator JONES. Before you would give your approval you would investigate to see whether the machinery could be furnished, or would you have anything to do with that?

Mr. HEYWORTH. I would not under the present methods. The purchasing departmen would furnish the information regarding machinery.

Senator JONES. I want to take as a particular example this Tacoma Shipbuilding Co. that has submitted an application to build eight ships and to build them this year. What would prevent you from recommending the letting of that contract to them for that many ships?

Mr. HEYWORTH. The fact that I would have no instructions to recommend more ships at the present time.

Senator JONES. As I understand, this application is a part of those pending, or it is not a part of those considered as pending?

Mr. HEYWORTH. I do not believe it would be covered by the number that are now pending contract.

Senator JONES. I see. So that under the instructions you have you can not consider that application at this time?

Mr. HEYWORTH. No, sir.

Senator JONES. And those instructions are issued by Mr. Piez or Mr. Hurley?

Mr. HEYWORTH. By Mr. Piez.

Senator JONES. I would like to ask you this: I did not understand what you meant by these adjustments to which Senator Johnson referred. Can you give me in a general way the character of these adjustments that you have been making on these 70 or 80 ships?

Mr. HEYWORTH. All contractors have damages for delays caused by lack of material and other expenses going on during that period more timber in the ship now than under the original contract, etc.—for which they have asked adjustments, and Mr. Hurley has instructed those adjustments to be made as rapidly as possible and fairly.

Senator JONES. And those are the general character of these adjustments?

Mr. HEYWORTH. Yes, sir.

Senator HARDING. Are you finding any disposition on the part of shipbuilders to exact large payments from the Government because of the emergency?

Mr. HEYWORTH. You mean larger payments than they are entitled to?

Senator HARDING. Yes; than contracted for.

Mr. HEYWORTH. So far I have found the disposition of the shipbuilders is fair, and they are eager to turn out ships and get along the best they can under all conditions.

Senator HARDING. You spoke of damages just now. Is that through failure of some to deliver materials?

Mr. HEYWORTH. Failure to deliver the timbers as rapidly as they should be delivered.

Senator HARDING. How is the builder damaged by that? Is his plant working without any results?

Mr. HEYWORTH. Overhead expenses, labor, uncertainty of how many men he shall have. He does not want to let them go and is afraid he can not get them back—investment, etc.—all.

Senator NELSON. Does the Government agree to furnish material under these contracts for these wooden ships?

Mr. HEYWORTH. Yes, sir; under most all contracts of the Government through the Shipping Board the Government is furnishing the lumber and timber.

Senator NELSON. So that if the lumber and timber is not furnished in time, as between the Government and the contractor, the Government is liable for any damages?

Mr. HEYWORTH. If it has caused the contractor expense.

Senator NELSON. That is what I mean.

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Is the work on wood ship construction proceeding as well as you could expect and satisfactorily at this time?

Mr. HEYWORTH. I think it is proceeding satisfactorily under all the conditions, and ought to improve each month.

Senator NELSON. How long since you commenced working extra shifts?

Mr. HEYWORTH. About four weeks ago.

Senator NELSON. And in how many yards, as near as you can tell?

Mr. HEYWORTH. I could not answer as to the exact number of yards.

Senator NELSON. Approximately?

Mr. HEYWORTH. I should say about 20 per cent.

Senator NELSON. In about 20 per cent of the yards you are working two shifts?

Mr. HEYWORTH. On the Atlantic and Gulf coasts.

Senator NELSON. How on the Pacific coast?

Mr. HEYWORTH. I could not answer that.

Senator HARDING. You said a moment ago you did not have any labor difficulties. Did you happen to notice a story in the Sunset Magazine of January describing a hull built in a nonunion shipyard which was held up in San Francisco for its equipment of engines, etc., and not touched?

Mr. HEYWORTH. No; I did not.

Senator HARDING. Would that come under your department?

Mr. HEYWORTH. Installation of machinery into wood ship hulls would come under the division of wood ship construction.

Senator HARDING. You never had this case reported to you at all?

Mr. HEYWORTH. Where is the hull?

Senator HARDING. San Francisco.

Mr. HEYWORTH. No, sir.

Senator HARDING. Does your department report cases of that kind?

Mr. HEYWORTH. Yes, sir. We have a hull at Coos Bay that is waiting installation of machinery; that will be taken to San Francisco and the machinery installed in San Francisco. Perhaps that is the hull you are referring to.

Senator HARDING. Is it held up because union labor will not consent to fit it out?

Mr. HEYWORTH. I could not answer that question, because I do not know anything in reference to the case to which you refer.

Senator JONES. Do you know of any case where a ship is tied up on that account?

Mr. HEYWORTH. No, sir.

Senator JONES. What is the difference in cost between the hull and the complete ship, ordinarily?

Mr. HEYWORTH. The hulls ordinarily will run, for a 3,500-ton ship, between $285,000 or $310,000 to $315,000.

Senator NELSON. A ton?

Mr. HEYWORTH. No; per ship.

Senator HARDING. You mean the whole boat?

Mr. HEYWORTH. Yes, sir.

Senator JONES. For the whole?

Mr. HEYWORTH. For the whole, the machinery and equipment, about $160,000, installation to from $50,000 to $60,000.

Senator JONES. That is the complete ship then would cost something over $500,000?

Mr. HEYWORTH. Yes, sir. The complete ship will go over $500,000, will be between $500,000 and $600,000.

Senator NELSON. And nearly $200 a ton?

Mr. HEYWORTH. Very close to it.

Senator CALDER. Mr. Heyworth, are any of these wooden hulls contracted for to include machinery?

Mr. HEYWORTH. Yes, sir.

Senator CALDER. Is that the practice with most of them?

Mr. HEYWORTH. No, sir; most of them are let, the machinery to be installed through the agents of the Shipping Board.

Senator CALDER. As I understand it, then, in most cases, and in practically every case, the contract for building the hull is let with one concern, and for the building of the machinery with another concern, and for the installation of the machinery with a third concern?

Mr. HEYWORTH. No, that is not true, generally speaking. Some builders of hulls will also enter into contracts to install the machinery in their hulls; other builders of hulls will not put the machinery in the hulls; those hulls will be equipped with machinery by some going plant or concern that is experienced in that installation work. Other hulls and machinery are let as a complete ship in the beginning under the original contract—all three characters exist under our boat contract to-day.

Senator CALDER. I was not in the room when you began your testimony. How many wooden ships have you contracted for?

Mr. HEYWORTH. I believe it is about 401.

Senator CALDER. How many more are you contracting for?

Mr. HEYWORTH. About 60.

Senator CALDER. Of these contracts how many wooden ships have been put in water?

Mr. HEYWORTH. From the best information I get of that, I think it is about two now, and the record shows 236 hulls between now and June 30.

Senator CALDER. What proportion of these contracts have never actually been started upon?

Mr. HEYWORTH. I do not believe there is any contract that has not been started.

Senator CALDER. What proportion of these contracts were let to concerns which never built ships before?

Mr. HEYWORTH. I would not like to answer that question, unless I went into it particularly as to every concern?

The CHAIRMAN. That appears in Admiral Bowles's statement.

Senator CALDER. Are you a practical shipbuilder?

Mr. HEYWORTH. No, sir.

Senator CALDER. Did you ever build any ships?

Mr. HEYWORTH. I stated to your committee that I built some barges.

Senator CALDER. What is your business, Mr. Heyworth?

Mr. HEYWORTH. Engineer and general contractor.

Senator CALDER. Have you built machinery for ships?

Mr. HEYWORTH. No, sir. I have been in general harbor work and river work and hydroelectric work and railroad work for a great many years—22 years.

Senator CALDER. Then you are hardly competent to give testimony as to the value of these wooden ships for overseas trade?

Mr. HEYWORTH. I believe you could get much more competent witnesses as to their value.

Senator CALDER. Mr. Ferguson testified that in his opinion not more than one-fifth of these wooden ships would be useful for overseas traffic. What do you think of that?

Mr. HEYWORTH. May I answer that question by saying that the old time shipbuilders think very highly of this design as produced by Mr. Ferris and as is being built now by the Shipping Board. I refer to such men as the Maine coast builders and some of the better known men on the west coast.

Senator NELSON. What is their opinion of this Ferris type?

Mr. HEYWORTH. Good.

The CHAIRMAN. And suitable for overseas trade?

Mr. HEYWORTH. Yes, sir.

Senator JONES. Mr. Heyworth, referring to that case of the Coos Bay ship, do you know why it is delayed there?

Mr. HEYWORTH. The machinery is not ready; it is a Hough type of ship.

Senator HARDING. Why is the machinery delayed?

Mr. HEYWORTH. The specifications and plans were to have been developed in detail by Mr. Hough and submitted to the Shipping Board's engineer and naval architect for approval, and those plans and specifications have not been furnished as rapidly as they should be.

Senator JONES. All the ships you are building there at Coos Bay are of the Hough type?

Mr. HEYWORTH. Yes, sir.

Senator JONES. I understood this ship was to be taken to San Francisco and the machinery installed there? Are you to take the machinery down from Coos Bay to San Francisco in the hull?

Mr. HEYWORTH. No, sir. The machinery will have to be shipped to San Francisco from the place of its production.

Senator JONES. And you are going to wait before you take the hull down from Coos Bay until the machinery is shipped to San Francisco?

Mr. HEYWORTH. We will have to do that. The ship facilities and the experience in machinery installation is much more reliable down there for this equipment.

Senator JONES. What I was wondering is why you do not take the hull on down there and get the machinery as soon as you can. Why hold the hull at Coos Bay?

Mr. HEYWORTH. We just decided this matter in the last three days.

Senator JONES. Decided it how?

Mr. HEYWORTH. To equip this boat with machinery at San Francisco.

Senator JONES. You have been holding it at Coos Bay expecting you would install the machinery there?

Mr. HEYWORTH. No; it was launched December 15, Some of these matters, among others, have to take their turn in getting attention.

Senator HARDING. In view of the fact that the Sunset Magazine, which is a very reputable publication, carries this statement, along with a picture of the hull, is it not rather remarkable that the department would not know anything about it?

Mr. HEYWORTH. What department?

Senator HARDING. Your department.

Mr. HEYWORTH. You asked me if I knew about this hull referred to in the Sunset Magazine as being at San Francisco, and I told you I did not.

Senator HARDING. I will put it in a little different form. Is it not remarkable in this crisis in shipbuilding that there should be a hull laying for months in San Francisco that can not be outfitted because of labor troubles, and your department not know about it?

Mr. HEYWORTH. Is this the Coos Bay hull?

Senator HARDING. Yes.

Mr. HEYWORTH. I do not know about it.

Senator BANKHEAD. Maybe that is a mistake of the paper.

Senator HARDING. Well, it publishes the photograph of the ship, and I am surprised he does not know about it.

Mr. HEYWORTH. The division of construction may have known about it before I took hold and have a full record of the same.

Senator HARDING. I do not want to be unfair to you about it.

Mr. HEYWORTH. I do not want to answer for the entire department about it.

Senator HARDING. I understand. I thought it was unusual that such a thing should exist and your department should not know about it, but I quite excuse you, since you are so new in the service.

Mr. HEYWORTH. This new department has taken over this work, and the department that operated it before has now the steel construction; and the gradual process of getting the records and the files and the organization of the old department transferred into this new department of wood ship construction that did not exist before, and we have been undergoing this transfer the last five weeks. The department may have full knowledge of some hull in the bay of San Francisco. Personally, I have not.

Senator NELSON. You spoke of this Hough type of engine. Is that a new type or was it an existing type?

Mr. HEYWORTH. No, sir. We are going to put standard engines that have been decided upon into the Hough type of ship, but certain arrangements of installation and fittings, adapting the machinery and engines to the Hough type, must be decided upon.

Senator NELSON. Was the Hough type a new type?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. That had not been used before this?

Senator BANKHEAD. They do not speak of Hough type of engine, but speak of the Hough type of ship.

Senator NELSON. The Hough type refers to the inside of the ship?

Senator JONES. No; the hull.

Mr. HEYWORTH. The whole ship.

Senator NELSON. Then the Hough type of ship is distinct from the Ferris type of wooden ships?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. And how many Hough type of ships are you building?

Mr. HEYWORTH. Forty.

Senator NELSON. Where?

Mr. HEYWORTH. On the west coast.

Senator NELSON. All on the west coast?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. And the Coos Bay ships are of that style?

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. How far along are they?

Mr. HEYWORTH. They are getting along as well as any of the other ships.

The CHAIRMAN. They are not ready for machinery as yet, except this one?

Mr. HEYWORTH. That is right.

Senator NELSON. Wherein do they materially differ from the Ferris type—I mean simply the outlines; I do not expect you to go into details.

Mr. HEYWORTH. They use smaller timbers, are more square and fuller on the bilges.

Senator NELSON. Of bigger beam?

Mr. HEYWORTH. Not necessarily.

Senator NELSON. Shorter or longer?

Mr. HEYWORTH. The difference is in the timber construction.

Senator NELSON. They are what we nonexperts would call more flat-bottomed boats than the other.

Mr. HEYWORTH. Yes, sir.

The CHAIRMAN. Do you know the draft of these Ferris type boats—3,500 tons?

Mr. HEYWORTH. Yes; they run 20, to 22 and 23 feet.

Senator NELSON. Loaded?

Mr. HEYWORTH. Yes, sir.

Senator NELSON. And this Hough type, how much?

Mr. HEYWORTH. About the same.

Senator NELSON. What is the difference between the two types as to safety and navigability?

Mr. HEYWORTH. I could not answer that.

The CHAIRMAN. How as to the cost?

Mr. HEYWORTH. I think they run about the same.

Senator RANSDELL. What is the average cost of those 3,500-ton wooden ships?

Mr. HEYWORTH. Between $500,000 and $600,000 each, complete, ready for sea.

The CHAIRMAN. Are you building any barges, Mr. Heyworth?

Mr. HEYWORTH. Our division is not.

The CHAIRMAN. Is there any division building barges?

Mr. HEYWORTH. I could not answer that.

The CHAIRMAN. We will excuse you now, Mr. Heyworth, and are very much obliged to you for your statement.

STATEMENT OF MR. J. E. BARNES, REPRESENTING SEATTLE, WASH., CHAMBER OF COMMERCE.

Senator HARDING. You come from the great shipbuilding center of the West, and you know the situation out there. Suppose you tell us about shipbuilding conditions in Seattle and on the Washington coast.

Mr. BARNES. Allow me to go back about two years. About two years or two years and a half ago, the only shipbuilding that we had in the Pacific Northwest were located in Seattle, the Seattle Construction & Dry Dock Co.; and crossing the bay was the Bremerton navy yard, which was specializing in small-boat building. We had employed in those yards at that time about 2,300 men. Since that time we have developed until we have in Seattle alone six steel yards, four of them in operation and two now with contracts which are getting ready to build ships; the new Todd Shipbuilding Co. at Tacoma and two steel yards at Portland. We are employing in the Seattle district proper at this time, in the shipyards—that is, outside of the navy yard—about 18,000 men.

The CHAIRMAN. You said you had six yards, and four in operation?

Mr. BARNES. We have six yards, four in operation and two with contracts getting ready to go into operation. The names of those four yards are the Seattle Construction & Dry Dock Co., the Skinner & Eddy Corporation, the J. F. Duthie & Co., and the Ames Shipbuilding & Dry Dock Co., the Erickson Engineering Co. (Inc.), and others are getting ready to go in. Naturally the thing I wanted to touch on mostly was the labor condition out there, feeling that I am thoroughly familiar with it, having been dealing with that for some time. I will state that I have been in Washington this time about seven months. Before that I was here off and on for two years I left here on the 24th of November and went out to the Pacific coast and was out there in Seattle about——

Senator NELSON. Let me ask, before you proceed further: Are you an employee of the Government?

Mr. BARNES. No, sir; I am employed by the Seattle Chamber of Commerce. I visited the yards in Seattle and I was down in Portland, and came back by the way of San Francisco, Los Angeles, and New Orleans.

I went particularly to study late developments in the labor situation. You understand, speaking fairly to you, that the chamber of commerce, as represented by me, to a large extent, represents employers of labor, so that anything I might say which might sound just a little bit one-sided you will understand is from my position as an employee of a business organization, representing to a large extent the employers who have to do with labor problems and who have to employ labor which is being affected by the operations of the Shipping Board and the various other Government institutions.

A year ago in June our minimum wage in Seattle for machinists was $4.20. We had a strike there in October, in which they were striking for a minimum of $6. I think they were out something like two or three weeks. Before that we had been affected and our steel plants practically shut down owing to the timber strike in the woods. They were then asking for an eight-hour day, and the retaliating strike of the ship carpenters in the steel yards who erect the frame

around the ships for the riveters, and that had virtually shut down the steel yards before they went out on the strike demanding a $6 a day minimum.

Senator HARDING. What was the nature of the carpenters' strike?

Mr. BARNES. The carpenters were striking in sympathy with the fellows in the woods who were asking for an eight-hour day, the carpenters demanding lumber coming from eight-hour mills, and they would not erect any scaffolding except with lumber which came from eight-hour mills. At that time we only had a very few eight-hour mills. Some few mills had given in and were running on an 8-hour basis, but sawing logs cut in the woods on the 10-hour basis. When we had only the Seattle Construction & Dry Dock Co., that plant was what was known at that time as a nonunion plant; in other words, no man who belonged to a labor union could go into that plant without surrendering his union relations. The next shipyard going in was the Skinner & Eddy, which organized and started in with what was called a "closed shop," that is, no man could work in that plant unless he was a member of organized labor or got a permit from organized labor to work in the plant. Then, following the closing of all the steel yards in Seattle, the four steel yards there went in as closed-shop plants.

Senator CALDER. Name the four.

Mr. BARNES. The Seattle Construction & Dry Dock Co., the J. F. Dutnie & Co., the Ames Shipbuilding & Dry Dock Co., and the Skinner & Eddy Corporation.

Senator CALDER. Are they all now closed shops?

Mr. BARNES. They are now all closed shops.

Senator NELSON. Which was the direct strike?

Mr. BARNES. The direct strike was in October.

Senator NELSON. From $4.20 to $6?

Mr. BARNES. To $6, practically.

Senator HARDING. Who was back of that strike, who conducted it?

Mr. BARNES. The metal trades, the boiler makers, molders, and the combination of the metal trades.

Senator HARDING. That is, last October?

Mr. BARNES. Last October; yes, sir.

Senator CALDER. Do you think the men were encouraged to strike through the knowledge of the provision of the shipbuilding contracts that the Government would pay the additional wage?

Mr. BARNES. I think, if you will permit me—this is a subject I am perfectly willing to go into in all its various phases—very often chaff blows in from another field. One field and another fellow lets his field get foul. I wish to say here that I am thoroughly convinced that inasmuch as our four shipyards in Seattle are strictly closed shops, that we are being used as pacesetters in the labor field, so far as shipbuilding is concerned. In other words, that is the fertile field in which to start operations. Naturally, being in that condition, anything that they can now start in those plants, whatever wage is established is then followed up in the other shipyards throughout the country. That would be the natural thing; that is the same thing I would do if I was running it. I would take that position in which I was the stronger.

Senator HARDING. That would be the just thing?

Mr. BARNES. That is the just thing if they are going to fight for wages, that should be established.

Senator CALDER. In other words, the Seattle yards are so organized that they are in position to fix any pay they wish?

Mr. BARNES. That is, they are in a better position, Senator, to make a settlement than any other shipyards that I know of in the United States.

Senator CALDER. And once having established a rate of wages there, it is easier then for the other yards to get the raises?

Mr. BARNES. Yes, sir. That was practically what was done last year. The other yards practically stayed on the work until it was determined what would be done in Seattle. The Macey Board was sent out there first.

Senator NELSON. I do not clearly understand you. These metal workers you speak of struck for themselves. They were accompanied by a sympathetic strike of the men working in the lumber, woods, or in the saw mills?

Mr. BARNES. No, sir. The first lay-off, when we were practically shut down, was the sympathetic strike on the part of the carpenters in these steel plants. They are known as ship carpenters, and they erect the platforms around these ships upon which the riveters and others work, the scaffolding up around the ship.

Senator NELSON. That was a sympathetic strike?

Mr. BARNES. That was a sympathetic strike.

Senator NELSON. And what was the point of the sympathetic strike?

Mr. BARNES. Forcing the lumber camps and the mills to granting an eight-hour day.

Coming back to my story, I believe, in fact I know, that in our country the building of the cantonment at American Lake and the cantonment construction throughout the United States, practically upset the labor conditions in the United States. I do not know of very many instances where labor was not given everything it asked for in the matter of wages and conditions, etc., while cantonment construction was on; and, mind you, I am not kicking on wages. We have never complained about how much wages we paid. The only thing we kick on is getting it settled at some time for at least a period of three months. Apparently they were given to understand that the Government would stand back of them and grant almost any demand which they made which could be put up in any form which was reasonable.

Senator JOHNSON. You do not mean that, do you?

Mr. BARNES. Absolutely, Senator; absolutely.

Senator JOHNSON. That the Government would stand by any request that was made to labor?

Mr. BARNES. Practically so.

The CHAIRMAN. That was "reasonable," he says.

Mr. BARNES. With any sense of reason; if they would ask any thing absolutely outrageous, of course not. There has never been, Senator, since June last year, a settled condition in our Northwest shipyards pertaining to wages paid.

Senator JOHNSON. Well, if the qualification be put on it—I probably did not understand. Let it be "reasonable," and then we would all agree that it ought to be done.

Mr. BARNES. No; I mean would be that great difference, Senator, between what the fellow asking a thing would determine as reasonable, not to show himself ridiculous, to what we would figure in dealing with him from the other side would be fair.

Senator JOHNSON. You mean that whatever the laborer might think was reasonable he could demand with impunity and the Government would pay what he demanded?

Mr. BARNES. That is what I am trying to say.

Senator HARDING. Apropos of that, what was the average rate of pay in the cantonment construction in the West?

Mr. BARNES. With their overtime and double pay for overtime, I would say that wages were as high as $8 and $9 a day; they are that now in the shipyards. Calkers in wood shipyards are getting $6 and demanding two hours overtime, which makes $9 a day wages.

Senator NELSON. Are they paying that in the shipyards now?

Mr. BARNES. Yes, sir; practically $9 for 10 hours in our yards.

Senator CALDER. You say workmen working in the shipyards are getting $6 and demanding two additional hours?

Mr. BARNES. The calkers in the wood yards are working 10 hours a day and 2 hours of that is double time in all steel yards in our district, with double time for overtime, and there is an immense amount of overtime.

Senator CALDER. The men are insisting upon the overtime?

Mr. BARNES. I will have to come at that from another angle.

Senator HARDING. I want you to make it clear. I understand Senator Calder's point. I can understand perfectly well that labor asks the time and a half or double time for overtime, but do I understand you to say that they are insisting on putting in the overtime?

Mr. BARNES. That is to the very best of my knowledge, which I think is quite accurate, that the calkers in the wood yards are practically demanding to be allowed to work 10 hours.

Senator HARDING. How does that square with the strike in the woods for an eight-hour day?

Mr. BARNES. There is no doubt in anybody's mind that what they are asking for, Senator, is an 8-hour day with the now 10-hour pay, and then with the emergency on for spruce and fir undoubtedly they will have the same advantage and chance. I do not blame them for asking for that at this time.

The CHAIRMAN. Does that go on at all in the lumber yards and the sawmills?

Mr. BARNES. No; at this time we are working on a 10-hour basis, but in the last three days there has been the understanding that—I think it has been held up for a day or so—we were to have orders from the Government to put all of our camps getting out Shipping Board material upon an eight-hour basis, granting the eight-hour day.

Senator HARDING. I want to ask you about that. Did that apply to the Pacific coast alone?

Mr. BARNES. We have not been able to ascertain. I have tried to find out whether it did or not. Last year Secretary Baker asked our lumber people to go on an eight-hour day basis.

Senator HARDING. The reason I asked you was because I received a telegram this morning about that, and I have sent my secretary up to the department to find out about it.

Mr. BARNES. The lumber people agreed to work eight-hour days, provided all the lumber camps were put on an eight-hour basis. We could not compete with the southern-pine people working 10 hours and ours working eight.

The CHAIRMAN. In the lumber camps do the men insist on two hours extra pay?

Mr. BARNES. No; they are working the 10-hour day now.

Senator HARDING. Has the order been issued with respect to the lumber mills?

Mr. BARNES. It has been held up a day or two. It was supposed to go out the other day.

Senator HARDING. If it will not divert you too much, we have a witness here from the Southern Pine Association, who related the wages paid in the southern lumber camps. Can you get at the wages paid in the lumber camps of the northwest?

Mr. BARNES. Our common laborer now, I think, is getting about on a basis of $3 or $3.25 a day.

Senator NELSON. For eight hours?

Mr. BARNES. Ten hours in the lumber camps; yes, sir.

The CHAIRMAN. All white labor?

Mr. BARNES. All white labor.

Senator JONES. That is the minimum wages?

Mr. BARNES. That is the minimum wage which applies in the lumber camp to, I would say, about 6 per cent of the men. You see, there is very little common labor in the lumber camp, except fellows who build the advance logging roads and bring out supplies for the donkey engines, etc. That would go up for second fallers $4.50, and head fallers $5.

Senator JONES. They are the men who fell the trees?

Mr. BARNES. Yes, sir. And then the chasers, who are the fellows who hook these logs together with what we call dogs, and the chaser is the fellow whose job it is to follow along after these logs to see that those hooks stay in, etc. Then we have another man who is known as the chokerman, and he is the fellow who puts the line upon the end of the log to drag in to make it drag on the best side, and in the woods he is a fairly skilled workman.

Senator JONES. What does he get?

Mr. BARNES. I would imagine he is getting $5.50 now. Then we have another fellow, who is fairly skilled, what we called the "bucker." Out in our country we only run one man on a cross-cut saw, and his wages would be about $4.50 at this time; and the hook tender, who is the foreman of each one of these little crews, and I should say he is getting about $7.50 to $8 a day.

Senator HARDING. Do they provision themselves?

Mr. BARNES. No, sir; they are boarded in the camp.

Senator HARDING. In addition to this pay?

Mr. BARNES. No; they pay their own board, which averages $5.50 to $6 a week. You never have any complaint as to the board of the logger in the Northwest; that is one thing, we do feed them.

Senator HARDING. Has there been any I. W. W.'s influence in the logging enterprise?

Mr. BARNES. All through it; yes, sir. Apparently we have been the hotbed out there of all kinds of sedition. We have had the I. W. W. and we have had the agitation of most every nature and

description, especially since the war started. A great number of arrests have been made in our country.

I would like to call your attention to the fact that to-day we have a lot of labor out there unemployed. When I was in Seattle three or four weeks ago I will venture the assertion that we had on the streets of Seattle no less than five or six thousand idle men.

Senator HARDING. Would you mind saying why?

Senator NELSON. Had they been on a strike?

Mr. BARNES. No, sir. They were men who were not able to connect up with a job, Senator. I would perhaps better illustrate the situation, but it is like if you would take every bit of correspondence in your office and drop it over into one heap, and then if you wanted to find a letter to-morrow morning—you would have the letter, but it would be all mixed up in the mess. And labor there is a jambled up mess, absolutely unclassified. The only classified labor that we had at all was that labor which belonged to organized labor. Had all of our labor been at the outset of the war members of organized labor, I believe we would have been in much better condition to-day, because all classes of men would have been classified. I do not want anybody here to understand me that I am contending against organized labor as an organization, but labor was unclassified. In my experience in Washington, with the exception of Mr. Hurley, now on the Shipping Board, it has been almost absolutely impossible to go to any department of this Government and discuss in an intelligent way what we are going to do about the labor situation and how we are going to come out. Out in our country the Shipping Board has, through the Department of Labor, formulated a plan of recruiting labor, by giving us all territory west of the Mississippi River, and splitting Nebraska and Colorado and through there, and throwing that in the northwest district, and south into the California district. The plan is that we use the organization headed by Mr. Clayton, of the Department of Labor, with its field men and the postmasters, etc., to find out such men as will go into the Shipping Board industries.

We have gotten out what is known as a "trade quiz." We have men who are experienced boilermakers who quiz the fellow who says he is a boilermaker to find out from his conversation whether or not he is a boilermaker. A man who is a good lawyer could take a fellow and talk to him in legal terms and determine whether or not he knew anything about the law. So, for example, with respect to a molder. We take the chance of examining them but we do not take the chance of shipping a fellow across the country unless we are fairly certain that he is a molder. What we are driving at is endeavoring in some way to settle down labor unrest, so that we will know how many men we are going to get, where to put them, and how much to pay them for a given period of time. So that the Department of Labor, in conjunction with the Shipping Board, has established at Seattle a central agency, to which all of these men are supposed to be sent. One of our great troubles to-day out there is that the shipbuilders themselves are competing bidding among themselves for men. Each one of those companies, there is no doubt in my mind, have agents in every other shipbuilder's yards who are looking out for fellows who look likely or who are good pace setters, and offering them more money to go over into the other plant. One builder gets short of boilermakers, and he immediately tries to rob the other

plant. This causes a turnover out there in this country of about 300 per cent.

Senator HARDING. You can not blame a man under those circumstances for selling his labor as high as he can.

Mr. BARNES. I do not blame the fellow working by the day for getting all he can get. But the idea is that we want ships. Some of us do get imbued with the idea that we want to do what we can to further this shipbuilding program. From my familiarity with the situation in Washington and my close connection here having been with naval officers, naturally I know the great need for ships. The 300 per cent turnover is an economic loss. It is not only a loss of money but an immense loss of time. A fellow has made up his mind that to-morrow morning he is going to over John Brown's, or day after to-morrow he is going to terminate his connection with this yard and going to move over to the other yard. He is not of very much benefit to this yard the day or two that he stays in there, because he slows up. He leaves a disgruntled bunch around him, because he has been offered more money. He says he is going to go over to the other yard, which leaves those men associated with him in this plant dissatisfied. When he goes over to the other plant, he can not keep to himself the fact that he has been asked to come over to that plant, and has been paid more wages, and he dissatisfies the crowd which is around him. And in the discussion of matters of efficiency, we find that he slows up the work of the fellows immediately around him for the first two or three days he is in that plant. So that men who are experts or claim to be experts—we hear about experts these days—figure that it is possible that every turnover we have costs us an average in skilled mechanics, receiving as high as $5 a day, about $40 turnover loss to the plant by these men leaving—their lost time, etc., goes in—and the disturbance which they create pulling out of one place and going to another and the riffle they create there when you throw them in the other place.

We must get away from that running of men back and forth from plant to plant bidding for wages. We must find some way whereby the men will be fairly well contented. We must pay them a wage which they can live upon, but that wage must be a fixed wage, and these men must know that is going to be the wage for a period of six months or maybe three months. But we have got to arrive at what we are going to pay our men so as to keep them working and quit worrying about the wage question.

The CHAIRMAN. You have no idle men now?

Mr. BARNES. Yes, sir; there are lots of idle men.

The CHAIRMAN. Idle men now?

Mr. BARNES. There are any amount of idle men.

The CHAIRMAN. What would be the necessity of the shipbuilders getting men from each other's plants?

Mr. BARNES. The scarcity of skilled labor. The men are not classified. We have now an arrangement with labor whereby they are going to permit us to promote our helpers just a little bit faster. If we can get one skilled man, we can put on three or four unskilled men, and it will be just like a soldier in the trench who requires three or four men behind him. Heretofore we could not promote without the permission of the union. In other words, it is supplying the demand that we are trying to keep control

of. They have now made some allowances whereby we can promote men who have been helpers. It does not take us long to teach a boy how to drive a rivet, and in a little while we can make him a first-class riveter. We put him on, and then we will be able to pick up and use a lot of this common labor which is floating around.

Senator NELSON. Have the unions consented to your employing these new men as apprentices?

Mr. BARNES. Yes, sir; and they have agreed to the promotion. The agreement is that men going into the plants now, like bridge carpenters, etc., who are not members of the boilermakers' union, go in under the permit system for the period of the war. In other words, these fellows do not propose to allow these men to come in and fill these plants while the rush is on and then when the war is over crowd them out of jobs; they propose to hold what they have when the war started, which I think is fair.

Senator HARDING. Are we to infer from your testimony that the solution of this question is a fixed-wage policy on the part of the Emergency Fleet Corporation?

Mr. BARNES. Yes, sir; and it is the only solution of it. Every other department of the Government has a fixed wage. The wages have been fixed in the arsenals, and the wages have been fixed in the shipyards; the navy yard has fixed a maximum wage, with a minimum of $1.04 less for first-class men. Then the Shipping Board has power to control what these yards do. These are all under Government supervision now, and if the shipyards of Seattle, for instance, would make use of this employment office which the Government has established there and which they are maintaining at a large expense, there would be no opportunity for the fellow to jump around or for those yards to bid back and forth among each other for men, because when they hired a man they would have to go down to this district recruiting office to get him, just the same as the Army does.

Senator HARDING. Will your shipyard unions enter into a contract for a minimum standardized product for a day's work? Let me illustrate my question. When I contract with the Printers' Union they write into the contract that no man shall be recognized as a linotype operator, for example, until he can set so many lines of type in eight hours. In stabilizing and standardizing the wage, would you contemplate so many rivets, for example, for the gang for a day?

Mr. BARNES. I do not think they have reached that stage in the boilermakers union. There is a great degree of difference in the number of rivets driven by the fellows on day and piece work naturally. Piecework riveters in some yards are driving rivets cheaper than in other yards. I think pieceworkers drive around 350 to 400 rivets a day and day workers drive from 170 to 200 a day.

The labor question will be opened again, I am pretty sure, the 1st of February, for another adjustment and we are ready to believe that they are then going to ask for $7 minimum. They are now getting $5.25 minimum with a 10 per cent bonus for a week's work, which means $5.77½ a day.

The CHAIRMAN. That 10 per cent goes into effect the first of February?

Mr. BARNES. That 10 per cent goes into effect the first of February, which puts the minimum at $5.77½. I do not think they are going to

accept it then. I think the labor board will readjust the wages. I think we will have a demand again for readjustment the first of February. It seems to have been a mighty ticklish question, one that everybody steers shy of. It is awfully hard to find out who is going to be responsible for labor. When you start to talk about labor here the fellow you are talking to throws up his hands and says, "Do not talk to me about labor. I am busy on this." You find the employers saying, "Do not talk to me about labor; I have got to get contracts first, and then I will talk about labor afterwards." Most all contracts have a clause providing that if labor goes up the board will pay it.

The CHAIRMAN. What is your solution of the difficulty?

Mr. BARNES. We are full of theories. I do not know of anyone who has given it more thought, because I have to look after a lot of private concerns not coming under this wage scale, not being paid by the Government. My contention is that regardless of what wage we pay—I am not contending for a low wage—it should be a fixed wage for a certain period, just as we determine the pay of a soldier, which is fixed for a certain period, and he knows that is what he is going to get. The fellow in the navy yard knows he is going to be paid that fixed wage until the readjustment period comes along.

The CHAIRMAN. How would you reach that, by agreement with the unions?

Mr. BARNES. That is what you will have to do out our way, make that agreement for a period and hold to it, or have another strike.

Senator NELSON. The unions out in your country absolutely control the labor situation as to wages?

Mr. BARNES. Yes, sir; practically so.

Senator NELSON. And other matters, too, for that matter?

Mr. BARNES. I would not say that; no. When the controversy was up some time ago, three of our yards were perfectly willing to go in and handle the strike themselves and fight it out, but they needed ships, and they tried to get their men to go to work, but they struck for about two weeks.

The CHAIRMAN. Is the I. W. W. a union to itself?

They have their own organization separate from any other?

Mr. BARNES. Yes, sir.

Senator NELSON. Are not many of the I. W. W.'s members of the union?

Mr. BARNES. Not very many of them.

Senator JONES. Let me see if I understand your proposal, Mr. Barnes. You propose to have a wage fixed between the Government and the unions that is to be regarded and respected by all of the employers and by labor for a certain definite time?

Mr. BARNES. Yes, sir.

Senator JONES. So that one employer will not be permitted to go into another plant and offer a man a greater wage?

Mr. BARNES. No more than the navy yard at Bremerton would have the right to fix their scale higher than the scale in effect at Mare Island and thereby take the Mare Island men away from that yard.

Senator CALDER. Have the labor unions agreed to this?

Mr. BARNES. They have agreed to this plan of recruiting.

Senator CALDER. Have they agreed that they should have a uniform wage?

Mr. BARNES. They put in for what we call a minimum wage. I do not believe they would agree to a maximum wage without a fight in what they term "private yards" at this time.

Senator JONES. How are you going to get your plan put into operation then, Mr. Barnes, if they will not agree to a maximum rate?

Mr. BARNES. I would not like to call this altogether my plan, Senator, but somewhere we have got to get down to a fixed basis; some time we have got to cut this boat loose and go. We have been getting ready to go on this cruise; we have got to get ready and holler "off" and go. There comes a time when we are finally compelled to cut loose and do this thing.

Senator JONES. Granting that is correct, how are you going to do it?

Mr. BARNES. For those shipyards that are now under Government control, I can not understand why, if the wage is fair, we can not go on the same basis as the navy yard.

Senator JONES. That is, your idea is that the Government should fix not only the minimum but every rate of wage for each class of employees for a definite time?

Mr. BARNES. Yes, sir.

Senator HARDING. In other words, you think if we put the price on wheat on the farm, we ought to put the price on labor on ships?

Mr. BARNES. Absolutely. The crews who take the ships out ought to have wages fixed. The captain of the ship ought to have his wages based on the tonnage of his ship and speed, etc.—all ought to have a fixed wage. In every department of the Government the Clerks' pay is fixed. In every department of the Government except this one a man knows what he will get when he goes from that post to this one. The arsenal wages are fixed. Ninety per cent of our trouble comes from the shipbuilders' rates. The employers because of greediness grab back and forth from each other. He creates the big demand. You can not blame the laborer for taking every dollar he can get. We all grab for every dollar we can get.

There has never been a question raised among our employers about wages or whether the men were going to get too much, but we ought to determine what we are going to pay the men so we can go to work.

Senator HARDING. You think, if I understand you correctly, that if we stabilize the wage and secure the consent of the unions to the promotion of helpers to heads of gangs, that we will have a labor situation equal to every demand on the west coast?

Mr. BARNES. Yes, sir.

Senator HARDING. You say you have 6,000 idle men now in Seattle?

Mr. BARNES. I think when I was in Seattle there were 6,000 men idle. I would say out of 6,000 that 5,000 were common laborers.

Senator CALDER. Did they want to work?

Mr. BARNES. Some of them did and a large proportion did not.

Senator CALDER. When I was in Seattle I saw many idle men.

Mr. BARNES. You saw a great lot of idle men.

Senator MARTIN. How do those men who do not want to work make a living?

Mr. BARNES. We started in in Seattle by giving boys in the shipyards $2.25 a day. They got very rapid promotion, and got up so that they are making $6, $8, $9 and $10 a day. They did not know what to do with so much money, Senator. They would work three days and loaf the rest of the time. The job was there any time they wanted to come, and they would use their own pleasure about working.

We all know these ships are necessary, and we all know that the men must stay at work and work steady if we are going to get these ships out.

The CHAIRMAN. These men are not idle all the time?

Mr. BARNES. That per cent of them which float around were idle, and then out of this 7,000 there were 5,000 men who had no job at all for that day.

Senator NELSON. Has not the effect of these high wages been to incline a certain class of men to work only part of the time?

Mr. BARNES. The irresponsible crowd, absolutely.

Senator NELSON. How can you, in that case, segregate the goats from the sheep?

Mr. BARNES. We have a lot of goats marked and are marking them as fast as we can. Maybe you do not understand this language, but we have in the Seattle shipyards a lot of men whom we call "pimps" and "macks." That is what we call them out in that country. They are men who live off fallen women, the ne'er-do-wells, and fellows who try to "duck" military service, who crowded themselves into those shipyards. Over in the navy yard we had a lot of them. We have been pretty busy lately trying to get those fellows located. We are trying to get enough men to take their places, so that we can shoot them out and let them go to France. They flocked in from Spokane and crowded into those industries which were liable from military duty, and they are the fellows who work two or three days a week, just enough to keep them on the pay roll.

Senator NELSON. And to give them money enough to "booze" with?

Mr. BARNES. Just a little bit of booze—of course, it has been dry out there.

Senator NELSON. Are you separating those men now?

Mr. BARNES. We will separate them, Senator, just as fast as we can find men to take their places.

Senator NELSON. Will they not make trouble after you dismiss them?

Mr. BARNES. No; because I think under the exemption law the superintendent of the plant passes upon whether or not a given man is suitable.

Senator NELSON. For military service?

Mr. BARNES. Or whether he wants to keep him in the plant or release him for military service.

Senator NELSON. They would make pretty good bomb throwers.

Mr. BARNES. They would be all right to put up for that purpose.

Senator CALDER. Mr. Barnes, would not the remedy be to conscript everybody from 18 to 50 and tag them, as Mr. Ferguson, of Newport News, suggested, and make them work?

Mr. BARNES. I can not see any reason why, in a stress like this, my Government should not say, "Barnes, we do not like the thing

you are doing. We think you should do something better, and this is what you should do." I think the Government should be in a position to come to you, Senator, and say, "We do not believe you are serving the country as well as you could. You had better resign your seat, and we will put you at this job." I do not think it is fair to pick me unless the Government has the same right to pick everybody else. I would pick them up to about 60 years old.

Senator HARDING. You think you would conscript the man power of the country?

Mr. BARNES. Absolutely. There is no reason why this Government should not have the right to say to me what I should do during this war. But I do think this, and I would like to have this committee consider it, because this labor situation is "ducked" and dodged so often -I have read your hearings. Men sit here and tell you there are no labor difficulties or troubles. That is idle talk. It must be ignorance. I am not going to accuse them of lying about it, because there are labor troubles and we are not getting the best out of the situation.

Senator NELSON. Have you noticed whether there is a certain class of men among these labor men who are agitators, who are making trouble because their heart is not in the war?

Mr. BARNES. I think that is true, to a certain extent, Senator; and on the other hand, I think that some of the best patriots we have in the United States are men who are members of organized labor. I have found since I have been in Washington that the fairest men I have talked to are men who are the head officers of the American Federation of Labor from Mr. Gompers down.

Senator NELSON. I have not any doubt about that; I think you are right. You will get a lot of bad men in.

Mr. BARNES. The scum always comes to the surface where you can see it, and naturally we get in those organizations agitators of the worst type.

The CHAIRMAN. We are very much obliged to you, Mr. Barnes.

Mr. BARNES. Thank you very much, Mr. Chairman.

The CHAIRMAN. I should like to put in the record here Mr. Hurley's letter on January 17, on the housing bill. I have also a letter from Admiral Bowles submitting a list of shipyards, including some corrections and additions to the list heretofore given by Mr. Ferris.

Senator. NELSON. I ask that that be incorporated in the record.

The CHAIRMAN. That will be printed in the record. I also have a letter from Mr. Bloomfield, inclosing some correspondence relating to housing at Newport News. I think that had better go in the record.

(The letters, etc., referred to are here printed in full as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 17, 1918.

Hon. DUNCAN U. FLETCHER,
United States Senate.

DEAR SENATOR FLETCHER: Bill (S. 3389) which you so kindly introduced to the Senate, is so necessary to the housing operations of the Shipping Board that I know you will pardon my request that you hasten its passage as quickly as possible.

Several conditions have arisen in securing property for housing that will delay matters considerably unless we have the power to take the land at once and arrange for details later. These questions refer not only to price, but also to cases where the property is tied up in estates, the controlling party of which may be abroad or can not

be found quickly. Your bill will give us the power to take the land and make all adjustments later, and it will be an extremely helpful aid if this bill could be disposed of this week.

I hope you will pardon my constant recurrence to this matter, as I appreciate that you are doing everything possible to aid us in our shipbuilding program.

Very truly, yours,

EDWARD N. HURLEY, *Chairman.*

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 17, 1918.

Hon. DUNCAN U. FLETCHER,
Chairman Senate Commerce Committee.

MY DEAR SENATOR: Referring to the restimony given by Mr. T. E. Ferris and to the answer appearing at the foot of page 513 of the record as to the shipyards of the United States that were capable of doing the work now carried on by the Fleet Corporation, I note that his list omits 8 yards where vessels are building under contract with the Fleet Corporation and 27 yards where requisitioned vessels are building, and therefore thought it might be of interest to the committee to have a correct list, which is inclosed herewith.

Very truly, yours,

A. T. BOWLES,
Manager Division of Steel Ship Construction.

Alphabetical list of contractors.

Company.	Office	Works.
STEEL VESSELS.		
American International Corporation.	140 North Broad Street, Philadelphia, Pa.	Philadelphia, Pa. (Hog Island).
The Atlantic Corporation	Portsmouth, N. H	Portsmouth, N. H.
The American Shipbuilding Co	Foot of West Fifty-fourth Street NW., Cleveland, Ohio.	Various Great Lakes ports.
American Shipbuilding Corporation.	Alexandria, Va	Alexandria, Va.
Baltimore Dry Dock & Shipbuilding Co.	Baltimore, Md	Baltimore, Md.
Bayles Shipyard (Inc.)	115 Broadway, New York, N. Y	Port Jefferson, Long Island, N. Y.
California Shipbuilding Co	Long Beach, Cal	Long Beach, Cal.
Columbia River Shipbuilding Corporation.	Portland, Oreg	Portland, Oreg.
Downey Shipbuilding Corporation	120 Broadway, New York, N. Y	Milliken, Richmond Borough, New York, N. Y.
Daniels, Oscar, Co	Woolworth Building, New York, N. Y.	Tampa, Fla.
Erickson Engineering Co. (Inc.)	New York, N. Y., eighteenth floor Hanover National Bank Building, Nassau and Pine Streets.	Seattle, Wash.
Federal Shipbuilding Co	54 Dey Street, New York, N. Y	Hackensack River, N. J.
Groton Iron Works	50 Broad Street, New York, N. Y	Groton, Conn.
	Groton, Conn	Noank, Conn.
Hampton Roads Shipbuilding & Dry Dock Corporation.	Norfolk, Va	Norfolk, Va.
Jahncke Shipbuilding Co. (Inc.)	814 Howard Avenue, New Orleans, La.	New Orleans, La.
Los Angeles Shipbuilding & Dry Dock Co.	Box C, San Pedro, Cal Los Angeles, Cal	Los Angeles Harbor, Cal.
Merrill Stevens Shipbuilding Corporation.	Jacksonville, Fla	Jacksonville, Fla.
Moore & Scott Iron Works	San Francisco, Cal	Oakland, Cal.
Merchant Shipbuilding Corporation	165 Broadway, New York, N. Y.; correspondence, Finance Building, Philadelphia, Pa.	Bristol, Pa.
Newburgh Shipyards (Inc.)	Newburgh, N. Y	Newburgh, N. Y.
Northwest Steel Co	Portland, Oreg	Portland, Oreg.
Patterson-McDonald Shipbuilding Co.	Seattle, Wash	Seattle, Wash.
Pacific Coast Shipbuilding Co	First National Bank Building, San Francisco, Cal.	Suisun Bay, San Francisco, Cal.
Pensacola Shipbuilding Co	155 North Clark Street, Chicago, Ill	Pensacola, Fla.
Skinner & Eddy Corporation	Smith Building, Seattle, Wash	Seattle, Wash.
Seattle Construction & Dry Dock Co.	Seattle, Wash	Do.
Southern Shipbuilding Corporation	Charleston, S. C	Charleston, S. C.
Sun Shipbuilding Co	Correspondence, 1428 South Penn Square, Philadelphia, Pa.	Chester, Pa.

Alphabetical list of contractors—Continued.

Company.	Office.	Works.
STEEL VESSELS—continued.		
Saginaw Shipbuilding Co	Saginaw, Mich	Saginaw, Mich.
Submarine Boat Corporation	5 Nassau Street, New York, N. Y	Newark, N. J.
Western Pipe & Steel Co. of California.	San Francisco, Cal	South San Francisco, Cal.
WOOD VESSELS.		
Alabama Dry Dock & Shipbuilding Co.	Mobile, Ala	Mobile, Ala.
American Shipbuilding Co	11 Broadway, New York City	Brunswick, Ga.
Beaumont Shipbuilding & Dry Dock Co.	Beaumont, Tex	Beaumont, Tex.
Barbare Bros	Tacoma, Wash	Tacoma, Wash.
Benecia Shipbuilding Corporation	131 Loidesdorff Street, San Francisco, Cal.	Benecia, Cal.
Coast Shipbuilding Co	504 Concord Building, Portland, Oreg.	Portland, Oreg.
Cumberland Snipbuilding Co	Portland, Me	South Portland, Me.
Coos Bay Shipbuilding Co	Marshfield, Oreg	Marshfield, Oreg.
Chandler, R. J	Los Angeles, Cal	Wilmington, Los Angeles, Cal.
Dantzler Shipbuilding & Dry Dock Co.	Moss Point, Miss	Moss Point, Miss.
Dierks-Blodgett Shipbuilding Co	Care of Dierks Lumber & Coal Co., Kansas City, Mo.	Pascagoula, Miss.
Feeney & Bremer Co	Tillamook, Oreg	Tillamook, Oreg.
The Foundation Co	Woolworth Building, New York City.	Passaic River, Newark, N. J.
Fulton Shipbuilding Co	Los Angeles, Cal	Head Mormon Channel, Wilmington, Cal.
Freeport Shipbuilding Co	Freeport, Me	South Freeport, Me.
Grays Harbor M. S. Corporation	Aberdeen, Wash	Grays Harbor, Wash.
Groton Iron Works	50 Broad Street, New York	Noank, Conn.
Grant Smith-Porter-Guthrie Co	Foot Baltimore Street, St. Johns, Portland, Oreg.	St. Johns, Oreg.
Gildersleeve Ship Construction Co	Gildersleeve, Conn	Gildersleeve, Conn.
Geo. A. Gilchrost	60 Main Street, Thomaston, Me	Thomaston, Me.
Hillyer-Sperring-Dunn Co	Jacksonville, Fla	Jacksonville, Fla.
Hammond Lumber Co	San Francisco, Cal	Humboldt Bay, Cal.
Hodge Ship Co	Moss Point, Miss	Moss Point, Miss.
Housatonic Shipbuilding Co. (Inc.)	Stratford, Conn	Housatonic River, Stratford, Conn.
Heldenfels Bros	Beeville ex	Near Port Aransas, Tex.
Jahncke Shipbuilding Co. (Inc.)	New Orleans, La	Tchefuncta River, La.
Johnson Shipyards Corporation	2941 Richmond Ter., Mariners Harbor, Shooters Island, N. Y.	Mariners Harbor, New York City.
Kingston Shipbuilding Co	Kingston, N. Y	Rondout Creek, Kingston, N. Y.
Kruse & Banks Shipbuilding Co	North Bend, Oreg	North Bend, Oreg.
The Kelly Spear Co	Bath, Me	Bath, Me.
Lake & Ocean Navigation Co	Room 1124, 208 South La Salle Street, Chicago, Ill.	Sturgeon Bay, Wis.; delivery, Montreal, Canada.
Lone Star Shipbuilding Co	111 Broadway, New York	Beaumont, Tex.
Maryland Shipbuilding Co	Lexington Building, Baltimore, Md.	Sollers Point, Md.
McBride & Law	Beaumont, Tex	Naches River, Beaumont, Tex.
J. N. McCammon	Houston, Tex	Beaumont, Tex.
Murnan Shipbuilding Corporation	836 Commercial Trust Building, Philadelphia, Pa.	Pinto Island, Mobile, Ala.
J. M. Murdock	Jacksonville, Fla	Jacksonville, Fla.
Midland Bridge Co	504-510 Midland Building, Kansas City, Mo; all mail to Houston, Tex.	Ship Channel, Houston, Tex
Morey & Thomas	Postoffice box 619, Jacksonville, Fla.	St. Johns River, Jacksonville, Fla.
Meacham & Babcock Shipbuilding Co.	Seattle, Wash	Salmon Bay, Wash.
McEachern Ship Co	Portland, Oreg	Astoria, Oreg.
Newcomb Lifeboat Co	Hampton, Va	Hampton, Va.
National Shipbuilding Co	120 Broadway, New York	Orange, Tex.
North Carolina Shipbuilding Co	Morehead City, N. C	Morehead City, N. C.
Nilson & Kelez Shipbuilding Corporation.	Seattle, Wash	Seattle, Wash.
Peninsula Shipbuilding Co	Portland, Oreg	Portland, Oreg.
Portland Ship Ceiling Co	130 Commercial Street, Portland, Me.	Portland, Me.
Potomac Shipbuilding Co	Colorado Building, Washington, D. C.	Quantico, Va.
Rodgers, Geo. F. & Co	Astoria, Oreg	Astoria, Oreg.
G. M. Standifer Construction Corporation.	611 Northwestern National Bank Building, Portland, Oreg.	Portland, Oreg.
Sloan Shipyards Corporation	Olympia, Wash	Olympia and Seattle, Wash.
Sanderson & Porter	52 Williams Street, New York City	Willapa Harbor, Wash.
Ship Construction & Trading Co	50 Broadway, New York City	Stonington, Conn.

Alphabetical list of contractors—Continued.

Company.	Office.	Works.
WOOD VESSELS—continued.		
Henry Smith & Sons Co	7 East German Street, Baltimore, Md.	Baltimore, Md.
Southern Dry-dock & Shipbuilding Co.	Orange, Tex	Orange, Tex.
L. H. Shattuck (Inc.)	Manchester, N. H	Piscataqua River, Portsmouth, N. H.
Sommarstrom Shipbuilding Co	Care Maj. C. L. Tilden, 217 Front Street, San Francisco, Cal.	Columbia City, Oreg.
Seaborn Shipyards Co	812 Leary Building, Seattle, Wash	Tacoma, Wash.
St. Helens Shipbuilding Co	900 Fife Building, San Francisco, Cal.	St. Helens, Oreg.
Sandy Point Shipbuilding Corporation.	Sandy Point, Me	Sandy Point, Me.
Tacoma Shipbuilding Co	Tacoma, Wash	Tacoma, Wash.
Traylor Shipbuilding Corporation	Allentown, Pa. Cornwells Heights, Pa	Cornwells Heights, Pa.
Tampa Dock Company	Tampa, Fla	Tampa, Fla.
Universal Shipbuilding Co	515 Union National Bank Building, Houston, Tex.	Houston Ship Canal, Harris County, Tex.
Union Bridge & Construction Co	Morgan City, La	Morgan City, La.
U. S. Maritime Corporation	502 Union Savings Bank Building, Washington, D. C.	Brunswick, Ga.
Wilson Shipbuilding Co	Astoria, Oreg	Astoria, Oreg.
Wrights Shipyards	Tacoma, Wash	Tacoma, Wash.
York River Shipbuilding Corporation.	West Point, Va	West Point, Va.
COMPOSITE VESSELS.		
Mobile Shipbuilding Co	Mobile, Ala	Mobile, Ala.
Kelly Atkinson Construction Co	Security Building, Chicago, Ill	Do.
Merrill Stevens Co	Jacksonville, Fla	Jacksonville, Fla.
Supple & Ballin	Portland, Oreg	Portland, Oreg.
Terry Shipbuilding Corporation	Savings Bank & Trust Co., Savannah, Ga.	Port Wentworth Termina, Savannah, Ga.
CONCRETE VESSELS.		
Liberty Shipbuilding Co	515 State Street, Boston, Mass	Not decided on.

Yards building requisitioned ships.

Name of company.	Office.	Plant.
Albina Engine & Machine Works	Portland, Oreg	Portland, Oreg.
Ames Shipbuilding & Dry Dock Co	Seattle, Wash	Seattle, Wash.
Bethlehem Steel Co	South Bethlehem, Pa	Sparrows Point, Md.
Cramp, William & Sons Ship & Engine Building Co.	Philadelphia, Pa	Philadelphia, Pa.
Chester Shipbuilding Co	1264 Finance Building, Philadelphia, Pa.	Chester, Pa.
Craig Shipbuilding Co	Long Beach, Cal	Long Beach, Cal.
Duthie, J. F. & Co	Seattle, Wash	Seattle, Wash.
Fore River Shipbuilding Corporation		Quincy, Mass.
Great Lakes Engineering Works	Detroit, Mich	Detroit, Mich.
Globe Shipbuilding Co	Superior, Wis	Superior, Wis.
Hanlon Dry Dock & Shipbuilding Co	Oakland, Cal	Oakland, Cal.
Harlan & Hollingsworth Corporation		Wilmington, Del.
Manitowoc Shipbuilding Co	Manitowoc, Wis	Manitowoc, Wis.
Moore, Samuel L. & Sons Corporation		Elizabeth, N. J.
McDougall-Duluth Co	Duluth, Minn	Duluth, Minn.
Newport News Shipbuilding and Dry Dock Co.	Newport News, Va	Newport News, Va.
New York Shipbuilding Corporation	Camden, N. J	Camden, N. J.
New Jersey Shipbuilding Co	Land Title Building, Philadelphia, Pa.	Gloucester, N. J.
Pennsylvania Shipbuilding Co	do	Do.
Pusey & Jones Co	Wilmington, Del	Wilmington, Del.
Standard Shipbuilding Co	44 Whitehall Street, New York City.	New York, N. Y.
Staten Island Shipbuilding Co	Port Richmond, New York	Port Richmond, N. Y.
Texas Steamship Co	Bath, Me	Bath, Me.
Toledo Shipbuilding Co	Toledo, Ohio	Toledo, Ohio.
Tampa Shipbuilding Co	Tampa, Fla	Tampa, Fla.
Union Iron Works		San Francisco, Cal.
Willamette Iron & Steel Works & Northwest Steel Co.	Portland, Oreg	Portland, Oreg.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 17, 1918.

SENATE COMMITTEE ON COMMERCE.

GENTLEMEN: In response to the Senate committee's order that I give further particulars regarding the Newport News housing incident, I inclose the accompanying from Mr. MacNary. Through other sources I learn that the owner referred to is one Finch by name, of the Arcadia Building.

If there is any further information which I can furnish, I shall be very glad to respond.

Respectfully, yours,

MEYER BLOOMFIELD,
Head Industrial Service Department.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 15, 1918.

MR. MEYER BLOOMFIELD,
Head Industrial Service Department, Division of Labor,
Washington, D. C.

MY DEAR MR. BLOOMFIELD: In response to your request for statement on our experience in negotiating for houses to care for our men at the instructor training center will state that considerable time was lost through an attempt to negotiate with the owner and agent of a building that was just being completed. This building was put up for the express purpose of housing workmen. The shipyard had negotiated for a long time with the owner of the building and had made several offers for taking over the building and operating it. Each step in the negotiations resulted in further demands in price and conditions under which the owner was willing to rent the buildings. The continued increase in demands finally resulted in the shipyard being unwilling to go further in the matter. The owner approached us with the proposition which included a very large money guarantee and extremely high rate of room rental and included the necessity of our partly furnishing the quarters. If we were to secure the quarters completely furnished, the rent was to be still higher. I was in no position to offer the guarantee, although the shipyard was willing to assist me in meeting any reasonable demands. Our men were cared for finally by the Shipyard Welfare Department taking our men about the city in automobiles, appealing to private families to care for these men.

I am inclosing copy of a statement turned in by one of our staff members relating his difficulties in looking for quarters.

Yours, truly,

E. E. MACNARY,
Expert Industrial Training.

(Care Newport News Ship Building & Drydock Co., Newport News, Va.)

JANUARY 12, 1918.

MR. CHARLES R. ALLEN,
Expert in Industrial Training, Washington, D. C.

DEAR MR. ALLEN: Accompanied by Mr. McKinney, of the instructor training staff, I made a canvass of a large portion of Newport News, Va., to determine the rooming conditions. From a list of prospective places received from the Y. M. C. A., which was identical with the list provided by the War Service Bureau and that furnished by Mr. McAllister, of the Newport News Shipbuilding & Dry Dock Co., we made notation of a large number of addresses and covered that portion of the city from the Warwick Hotel to Fifty-sixth Street between the river and railroad.

We found a very limited number of rooms which could be rented by men only. All of the light-housekeeping rooms listed had been rented, and only in one or two places could a man and wife secure a room. In no place could a man with wife and children secure rooms under any agreement. A further search was made on the boulevard, but we were unable to find anybody who was willing to accommodate a man with a family.

Yours, truly,

C. J. MERCHANT,
Member Instructor Training Staff.

(Thereupon, at 4.45 o'clock p. m., the committee proceeded to the consideration of executive business, and at 5.10 o'clock p. m. adjourned to meet Monday, January 21, 1918, at 2 o'clock p. m.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

MONDAY, JANUARY 21, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher, presiding.

Present: Senators Fletcher (Chairman), Sheppard, Bankhead, Nelson, Jones, and Calder.

The CHAIRMAN. Gentlemen, Mr. Piez, the general manager of the Emergency Fleet Corporation, is here, and we can hear him now.

Senator JONES. Mr. Chairman, before Mr. Piez begins, Representative Hadley, from the State of Washington, is here, and has some telegrams that he wants to present to the committee before he goes back to the House. It will take him only a few minutes to read them, and I suggest that he be permitted to do so now.

The CHAIRMAN. All right. Mr. Hadley, the committee will be glad to hear you now.

STATEMENT OF HON. LINDLEY H. HADLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON.

Mr. HADLEY. Mr. Chairman, I received late Saturday evening two telegrams, one of which, on the face of it, at least, purports to relate to certain testimony which has been presented at the hearings before this committee; and for that reason I thought it was perhaps material for me to submit these telegrams to the committee.

Both telegrams relate to the same matter. I may say that they came from Anacortes, in the State of Washington, that being in the district which I at present represent in the House. Shall I read them, or simply submit them for the record?

The CHAIRMAN. I think it would be better for you to read them. The committee will be very glad to hear them.

Mr. HADLEY. The first is from the Anacortes Chamber of Commerce, and reads as follows:

ANACORTES, WASH., *January 17, 1918.*

Hon. L. H. HADLEY, M. C.,
Washington, D. C.:

Referring to investigation of Anacortes Shipbuilding Co., particularly testimony of Admiral Bowles, wish to advise you that contrary to this testimony this company has more than $52,000 worth of equipment, and undoubtedly one of the most modern wooden shipbuilding plants in America with capacity for 12 ships per year. At the time of Bowles's testimony there were actually

4 keels laid and 2 ships about one-half in frame and keel blocks laid for 2 more keels. It has been reported that the company was ordered to discontinue work on all but 4 ships, evidently meaning to dismantle the plant. Owing to the urgent need of ships and contracts being let to other yards having nowhere near the equipment and capacity of this company, it would seem folly to in any way cut down the program of this yard, besides occasioning a great financial loss. The community is amply able to provide lodge and board for all workingmen without any expense on the part of the Government. Would like immediate assistance.

ANACORTES CHAMBER OF COMMERCE.

The other telegram is from C. C. Barnett, of Anacortes, Wash.

Senator NELSON. Is that the Mr. Barnett that was up in Alaska for a while?

Mr. HADLEY. I do not know, Senator Nelson, as to that, although I know Mr. Barnett, as a citizen of Anacortes. I am personally acquainted with him, but I do not know whether he was ever in Alaska.

The CHAIRMAN. Was he ever connected with the Clinchfield Navigation Co.? There was a Mr. Barnett who has been mentioned before the committee in that connection.

Senator JONES. No; he is not that man; he is a resident of Anacortes.

Mr. HADLEY. The telegram from Mr. Barnett reads as follows:

ANACORTES, WASH., *January 18, 1918.*

Hon. LIN. H. HADLEY,
Washington, D. C.

Concerning instigation—

That is the word employed in the telegram, but I presume it means "investigation."

of Anacortes Shipbuilding Co., I know, of my own knowledge, that six keels are laid and on two ships the frames are about half up. All that is needed to rush completions is timber. I understand an effort is being made to discriminate against this yard and either dismantle or cut down number of ships building. This would be folly; this yard has capacity and equipment for 12 ships building at once, and the community is able to provide accommodation for all workmen without expense to Government. In view of Government's urgent need of shipping and this yard's modern and complete equipment, I appeal to you to render immediate assistance if possible; also confer with Senator Jones.

C. C. BARNETT.

Senator NELSON. Anacortes is on an island, is it not?

Mr. HADLEY. Yes; it is a small island connected with the mainland by rail and by wagon road, on the westerly side of the mainland, just at the easterly end of the Straits of San Juan de Fuca, or approximately so.

I wish to submit these telegrams for consideration in connection with such testimony as may have been introduced. I know nothing of the circumstances, other than as stated here; but the telegrams seem to relate to some previous testimony that has been given before this committee.

The CHAIRMAN. Very well, Mr. Hadley; they can be filed in the records of the committee, and the matters mentioned in the telegrams can be looked into by Mr. Piez, the general manager of the Emergency Fleet Corporation, who is present now.

STATEMENT OF HON. CHARLES PIEZ, VICE PRESIDENT AND GENERAL MANAGER UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION—Resumed.

Mr. PIEZ. We have no record of a contract with the Anacortes Shipbuilding Co., Mr. Chairman.

Senator JONES. I think, Mr. Chairman, it has been brought out in these hearings that this shipyard was a subsidiary for or a company that was working in connection with the Sloan Shipyard Corporation.

Mr. PIEZ. Oh, with the Sloan Corporation?

Senator JONES. Yes.

Mr. PIEZ. I want to say, Mr. Chairman, that I have similar telegrams; but in view of the fact that Mr. Hadley has already put his in the record, I will not read those that I have received.

Senator NELSON. But these telegrams are not from the company itself.

Senator JONES. No; but these are from citizens there stating what the conditions are.

Mr. Chairman, shall I proceed to ask Mr. Piez the questions I had in mind?

The CHAIRMAN. Yes. Senator Jones desires to ask you some questions, Mr. Piez.

Senator JONES. Mr. Piez, you have authority to state what the policy of the Emergency Fleet Corporation is, and is going to be, with reference to the building of wooden ships?

Mr. PIEZ. Only after consultation with the chairman; yes, sir.

Senator JONES. Now, there we are again.

Mr. PIEZ. I can tell you the policy, if you want that, Senator Jones. I am not——

Senator JONES (interposing). Well, you can tell me what the policy is and what it is going to be to-morrow?

Mr. PIEZ. Yes.

Senator JONES. Well, I guess that is what I want. I had received the impression from the other testimony, taken a few days ago, that it was going to be the policy of the Emergency Fleet Corporation to get all the ships, both steel and wood, that it possibly could, at anything like reasonable rates.

Now, Mr. Heyworth stated the other day that he had been instructed not to let any additional contracts for the building of wooden ships; and I wanted to ascertain what the policy of the Emergency Fleet Corporation is, especially with reference to the building of wooden ships on the Pacific coast.

And I will say that I do not want this information for the purpose of embarrassing the Emergency Fleet Corporation, or anybody else, but I think it would relieve it of very great embarrassment if it would announce what its policy is going to be. And I think it would relieve it of a great deal of embarrassment if that policy were made public, so that those who contemplate building wooden ships will know what to do and what not to do. And also, possibly, it would relieve the Emergency Fleet Corporation from the importunities of Senators and Representatives with reference to these different contracts.

So I would like for you to state what the policy of the Emergency Fleet Corporation is, especially as relating to the Pacific coast.

Mr. PIEZ. Mr. Hurley dictated this statement on the subject of policy—if I may read it.

Senator JONES. Yes.

Mr. PIEZ (reading):

The policy of the Shipping Board and the Emergency Fleet Corporation is to build the ships that can be built and to build them as fast as human labor can turn them out. This applies to the wooden ships as well as to the steel ships. Our policy is to give as much support as possible to those who already have contracts, rather than withdraw that support in order to extend the number of yards and ships that might exist on paper. New contracts are balanced against the available labor supply and the available supply of materials. I do not believe that Congress desires the Emergency Fleet Corporation to issue any contracts where there is no assurance that labor and materials can be supplied. nor do I believe it wise to issue contracts to yards which would merely take labor and materials from other yards, running up the cost of our program without increasing the number of ships turned out. The contracts already issued for wooden ships calls for more lumber than the amount that is being supplied at the present time. As soon as there is assurance of getting more lumber it will be safe to issue more contracts for wooden ships. We must not dissipate our strength.

This is simply a general statement that I wish to supplement now——

Senator JONES (interposing). Well, I want to say that it seems to me that nobody can find any objection to that statement as to policy. But when we come to apply that now to the concrete case—and that is what I want to do now——

Mr. PIEZ. Yes.

Senator JONES (continuing). First, I want to ask if there is any doubt about the supply of lumber on the Pacific coast for wooden ships?

Mr. PIEZ. We are making an investigation of that at the present time. You know we have drawn on the Pacific coast for almost 200 schedules, to be applied to eastern shipyards and to contracts under construction in eastern yards. We have interfered by embargoes that we have placed on lumber of the sizes that they use in connection with the plans of the War Department, and particularly with the Aircraft Production Board, and we now have two gentlemen on the Pacific coast who are investigating that entire lumber situation. We think there are supplies of lumber there that we have not yet tapped, but those that we have we feel are just barely sufficient for our present needs, and we do not think it wise on that account, until we have made an investigation in each case, to let further contracts. because if there is a further dilution, both of labor and of materials. it affects the contracts that we have let.

Senator JONES. What do you mean by a "supply" of lumber?

Mr. PIEZ. The available lumber that is usable in ships—of the sizes large enough for ships.

Senator JONES. Well, you do not have any doubt of the ample supply of lumber of that kind on the Pacific coast in the woods. do you?

Mr. PIEZ. No; not in the woods.

Senator JONES. That is what I want to find out. Are you afraid you can not get it out?

Mr. PIEZ. Yes. There is a scarcity to-day of woodsmen. There is a plan afoot to send in 5,000 or 6,000 more men, to increase the cut, and we are having difficulty——

Senator JONES (interposing). Well, have you got information from the lumber mills out there that they are not able to supply more money if it is called for?

Mr. PIEZ. We have some difficulty in getting lumber as promptly for our eastern needs as we desire.

Senator JONES. Well, have you any trouble about getting lumber for your western needs?

Mr. PIEZ. No; that has not developed.

Senator JONES. Well, if there has not developed any trouble about getting lumber for the western needs, what has brought up the doubt about your being able to supply the demands?

Mr. PIEZ. We have had to place an embargo on lumber of certain sizes in the West, in order to get the supply that we need in the East.

Senator JONES. Place an embargo against whom?

Mr. PIEZ. Against delivery of all sizes above, say, 14 by 14.

Senator JONES. Against the the delivery to whom?

Mr. PIEZ. To anyone outside of the——

Senator NELSON (interposing). Outside of the Shipping Board?

Mr. PIEZ. Yes; to anyone outside of the Shipping Board.

Senator JONES. Well, I know; but you furnish all the lumber to all the shipping plants out there, do you not?

Mr. PIEZ. Yes.

Senator JONES. Well, then, have you embargoed against your own plants?

Mr. PIEZ. No; but we have had to embargo against every other use.

Senator JONES. I understand that; you will not let anybody get into the shipbuilding business out there and do any other shipbuilding?

Mr. PIEZ. We can not afford to, Senator Jones.

Senator JONES. Yes; I am not asking you to do that. But you have not found any necessity of embargoing against your own shipbuilding plants, have you?

Mr PIEZ. No; not yet.

Senator JONES. Well, what has raised the doubt, then. What information have you that has produced doubt in your mind that you would be unable to supply your own yards to the full capacity to which they can work in the building of ships?

Mr. PIEZ. We have some doubts to-day as to whether we can supply our own yards on the Pacific coast and the yards on the east coast that require lumber from the Pacific coast.

Senator JONES. Now, what information have you that raised that doubt?

Mr. PIEZ. Simply from general information that we have gotten through our purchasing department.

Senator JONES. Well, you have not gotten it from any of your shipbuilders, have you?

Mr. PIEZ. Yes; but the west coast shipbuilders, Senator Jones, are not the only ones who are drawing on the Pacific coast for lumber.

Senator JONES. I understand that you have ordered about 40,000,000 or 60,000,000 feet out there?

Mr. PIEZ. About 50,000,000 feet for the eastern market, and all of it of a very large size.

Senator JONES. Well, that order has been in existence for some time, has it not?

Mr. PIEZ. Yes.

Senator JONES. Have you had any doubt expressed by any of your shipbuilders on the Pacific coast that with that order to be filled you would be unable to supply them with the lumber as fast as they would need it?

Mr. PIEZ. Not on the part of the shipbuilders; but I understand there is some doubt——

Senator JONES (interposing). Well, are they not the men who are likely to know better about it than anybody else?

Mr. PIEZ. Hardly, Senator Jones; I do not think they know how big a demand we are making on the lumber resources of that district for other points.

Senator JONES. Why do they not know it? You have not concealed it. You just said that you had ordered 50,000,000 feet there.

Mr. PIEZ. I do not think they are in a position to know it.

Senator JONES. I think they do know it; I think they have known it for some time.

Mr. PIEZ. We have a man out there now investigating that very situation.

Senator JONES. What is his name?

Mr. PIEZ. Can you tell me, Mr. Browne?

Mr. BROWNE. Eggelston.

Senator JONES. Eggelston; where is he from?

Mr. PIEZ. Do you know, Mr. Browne?

Br. BROWNE. No.

Mr. PIEZ. He was attached to Mr. Browne's department.

Senator JONES. What business has he been in?

Mr. BROWNE. He is a lumberman.

Senator JONES. Where from?

Mr. BROWNE. I do not know.

Senator JONES. From the South?

Mr. BROWNE. I think he has had experience in southern lumber; yes.

Senator JONES. And he does not know anything about the timber of the Pacific coast until he learns it when he goes out there?

Mr. BROWNE. I do not think that is the point.

Senator JONES. Well, I did not ask you for your opinion about that. I asked you for information.

Mr. BROWNE. I do not know whether he had had any experience in Douglas fir lumber or not.

Senator JONES. Well, do you not think it would be a pretty wise thing to get the judgment of men who are thoroughly familiar with the conditions on the west coast, and the manner of getting out lumber from the western woods, and the men who are familiar with the mills and the possibilities there?

Mr. BROWNE. We have had the judgment of the Douglas fir emergency bureau, which represents all of the lumbermen on the Pacific coast; and they were very anxious to have this embargo placed, be-

cause they were afraid that there was not lumber enough for everybody.

Senator JONES. Well, Mr. Browne, we are not questioning the wisdom of the Shipping Board in placing this embargo. That is not what I am trying to get at now at all. What I am trying to get at is, the information upon which you claim, or the Emergency Fleet Corporation claims that it can not supply its own shipbuilders with all the timber that is necessary to use their yards to the full capacity. That is what we are trying to get at; and you say that you have sent Mr. Eggleston out there to get that information?

Mr. PIEZ. Yes.

Senator JONES. And what I want to know is, why you did not get that information from somebody out there?

Mr. BROWNE. We did get that information from somebody out there.

Senator JONES. Whom did you get it from?

Mr. BROWNE. We got it from the Douglas fir emergency bureau.

Senator JONES. Who was on that bureau from the Pacific coast?

Mr. BROWNE. Mr. Long, for one; I do not remember the other gentlemen's names.

Senator JONES. Did Mr. Long say that you could not get lumber out there sufficient to keep the yards running to full capacity?

Mr. BROWNE. He was afraid we would not be able to do so.

Senator JONES. Have you got a written report from him on that?

Mr. BROWNE. I have not any written statement to that effect; no, sir.

Senator JONES. Is there not any written report to that effect in the records of the Emergency Fleet Corporation?

Mr. BROWNE. I doubt it.

Senator JONES. When did he express that opinion?

Mr. BROWNE. About the 1st of December.

Senator JONES. Was he here in Washington?

Mr. BROWNE. Yes, sir.

Senator JONES. Well, I understood that this order was issued only a week ago, to stop the building of wooden ships—or the letting of additional contracts out there?

Mr. BROWNE. I do not know anything about that order.

Senator JONES. Well, that is what Mr. Heyworth said in his statement before the committee the other day.

Mr. PIEZ. What we purposed to do, in advising Mr. Heyworth, was to take under consideration each application that was filed for additional ships. We are having difficulty in carrying out our program. We have got to-day, under contract, something over 400 wooden ships. We are going to try to keep all of those yards which are proving competent supplied with orders, but we have got to exercise some discretion in doing it.

Senator JONES. Yes.

Mr. PIEZ. Because we have got a program before us now for immediate construction that, so far as our information goes, will use up all the big-timber supply available, up to August 1.

Senator JONES. I wish you would get more information from people on the ground, from people who know about the possibilities of the Pacific coast and the possibilities of the Pacific coast mills.

Mr. PIEZ. Yes.

Senator JONES. And I wish you would get it from men who are there and who know what they are talking about. The principal complaint that I have from people out there is that the men that are sent out there do not know anything about the conditions there; and one great complaint that comes here, in reference to getting out spruce timber for aeroplanes, is that they say they have simply tried to send men out there who do not know anything about it, and that they want men who do know where spruce timber can be gotten, and how it can be gotten out. Of course, that is not in your department.

Mr. PIEZ. No.

Senator JONES. But it simply illustrates how they seem to be looking after those things. But I want to say that you can get men from the Pacific coast; there are a great many experienced lumbermen out there, who are just as patriotic as anybody in the United States, and who want to do everything they possibly can to develop shipbuilding in this country, and especially to carry on this war; and their opinion is worth something when they give it; and they can tell you about the labor supply, about the possible capacity of the mills, and about what can be done in the getting out of this timber. And I think that the Emergency Fleet Corporation would do a very wise thing to get this information from those men; they can give it to you much sooner and much better than any man from the East, who does not know anything about our conditions can get it from going out there.

Now, that is a suggestion that may not be worth anything, but I want to make it to you at this time.

Mr. PIEZ. Yes, sir.

Senator JONES. And now I want to ask your judgment about a concrete case, and we can get at your policy, perhaps, better in that way than in any other.

Mr. Rhodes, of Takoma, Wash., was here and testified before this committee a few days ago. He represents the Tacoma Shipbuilding Co. I have a report from your office stating that that shipbuilding company is doing satisfactory work.

Mr. PIEZ. Yes.

Senator JONES. They have a contract for four ships now. The last one of these ships is to be launched the 1st of July. He says they expect to have it finished then. And if they do not get additional contracts, their yard will be empty on the 1st of July; it will have to stop.

They have asked for additional contracts. Mr. Heyworth says their application came in after he had received orders not to let any more contracts for wooden ships, and therefore he can not let the contract to them. Mr. Underwood, in your department, tells him that they are going to let 15 more contracts, but he does not know whether they can give Mr. Rhodes's company one or not. The assistant to Mr. Hurley tells him that his company is probably going to get contracts for four ships. And I have a letter from Mr. Hurley this morning, saying that he will get none.

Now, what is the matter? How do we get all of those different kinds of replies with reference to this matter?

Mr. PIEZ. In the first place, that gentleman quoted us a price that was materialy higher than other prices.

Senator JONES. I am not speaking about the prices now. I would just like to know why it is that we get all these different reports from these different sources in the Fleet Corporation?

Mr. PIEZ. In the first place, Mr. Heyworth does not place contracts for ships; he constructs the ships after they are contracted for; of course, he is consulted as to the desirability of building ships in certain yards because of his intimate knowledge of the conditions that obtain there.

Senator JONES. I think he testified before this committee several days ago that whenever a contract comes in the first thing that occurs is it comes to him for report as to whether a contract should be let.

Mr. PIEZ. Yes.

Senator JONES. He said also that he had been directed not to consider any more contracts for wooden ships, and therefore he could not consider this application at all.

Mr. PIEZ. Temporarily; yes, sir; until this lumber situation cleared up.

Senator JONES. That part of it is plain, then; what about Mr. Underwood?

Mr. PIEZ. Mr. Underwood is a member of the contracting department, and, of course, he is acting generally under the same instructions as Mr. Heyworth, that for the present we are not going to let additional contracts until this transportation situation clears up and until the lumber situation clears up, and until we have made a close enough survey to get a proper view of it.

Senator JONES. Then, what about the assistant to the president? Under what authority would he tell Mr. Rhodes and Representative Johnson that Mr. Rhodes was going to get a contract for four ships?

Mr. PIEZ. I do not know as to that, Senator Jones; you will have to ask him about it, in all probability. He has not been in the habit of making such statements, as a rule; he is a very discreet young man; I should not think he would take that upon himself.

Senator JONES. Is he a shipbuilder?

Mr. PIEZ. I do not know as to that; I hardly think so.

Senator JONES. What has been his experience?

Mr. PIEZ. Which assistant to the president are you referring to?

Senator JONES. Mr. Lord.

Mr. PIEZ. Oh, I did not know that.

Senator JONES. I understand that he is the first assistant to the president.

Mr. PIEZ. I did not have Mr. Lord in mind when I answered you about that.

Senator JONES. Is he an experienced shipbuilder?

Mr. PIEZ. I do not know whether he is a shipbuilder or not.

Senator JONES. You do not know what his experience has been?

Mr. PIEZ. I do not.

Senator JONES. You do not know what his business has been?

Mr. PIEZ. I do not.

Senator JONES. Well, he will have to explain, then, as to why he would make statements of that kind, or promises of that kind.

Mr. PIEZ. I think it is proper for him to explain it.

Senator JONES. I think the board, however, ought to see to it that there is consistent action along those lines.

Mr. PIEZ. I do not know that we are working at cross-purposes in that regard; but I am very glad to have this information from you.

Senator JONES. I want to get it straightened out. That is what we want to have—a straight and consistent policy in this matter, so that everybody will know what the policy is and help carry it out.

Mr. PIEZ. Mr. Lord is not dictating the policy, and would not presume to do so.

Senator JONES. It is not a question of dictating the policy; but he just said to Mr. Rhodes, "You will get a contract for four ships."

Now, that shipyard will be empty on the 1st of July. It is a corporation that is composed of local people there at Takoma——

Mr. PIEZ. Yes.

Senator JONES (continuing). Many of whom are known, and who, as Mr. Rhodes stated here, represent a financial ability of ten million or twelve million dollars. They organized a company to aid the Government in the building of ships. Not a single officer of the company gets any salary, except the general manager.

Now, he says if they can get contracts, they would expand their yard without expense to the Government, at their own expense, by the building of ways sufficient to build eight additional ships. And they will build the four which they have and eight more ships, and launch every one of them this year.

Now, do you not think it would be very desirable to have a yard going on that can do that?

Mr. PIEZ. I think so—if they can carry out their promises.

Senator JONES. Well, have you any reason to think that they can not?

Mr. PIEZ. Of course, they are promising only the construction of the hull, Senator Jones.

Senator JONES. Yes; of course that is all they will do.

Mr. PIEZ. And there are other things that have to be tied up with that; and we have a great many ships——

Senator JONES (interposing). What are those other things?

Mr. PIEZ. Machinery, of course.

Senator JONES. That is what I want to get at. Do you think you can not supply machinery for those ships? Is that the reason that you do not want to let contracts for them?

Mr. PIEZ. It is a question whether we can supply it within that time.

Senator JONES. Well, would it not be desirable to have those hulls finished just as soon as you can get them, if you can get the machinery within a reasonable time to put in them?

Mr. PIEZ. I will say yes to that.

Senator JONES. Well, then, do you want to say to this committee that conditions are such that you do not believe that you can get the machinery for those ships within the time?

Mr. PIEZ. I will not say that, because that is a question that we will have to investigate in order to determine.

Senator JONES. That is not the reason, then, why you do not contemplate letting these contracts to this company?

Mr. PIEZ. The immediate reason is that we are not satisfied that we can carry out our present program on the Pacific coast and the program in the East—for which we are dependent for timber on the Pacific coast—within the time specified if we place more contracts on the Pacific coast and dilute our present supply.

Senator JONES. Well, where do you think is the best place to put contracts—where they have the material at hand and can build the ships, or at a place where they have to ship the material 3,000 or 4,000 miles?

Mr. PIEZ. There is no question, Senator Jones, about the answer to that. But, then, we have got almost 200 shipways on the Atlantic and Gulf coasts. We have got the work under way there; we have got to supply it. Ths Emergency Fleet Corporation is under very serious expense because of the difficulty in getting a proper amount of lumber to these yards, and we have got to decide for ourselves further, in view of the very serious conditions that exist, and the delays that have occurred in the East here; we can go out and deliberately encourage the new construction in the West, with the ultimate result, perhaps, of delaying the completion of the ships already begun and under way in the East. Now, that is one of the difficulties that we have.

Senator JONES. Yes.

Mr. PIEZ. If you gentlemen on the Pacific coast have got an emergency fir committee who ought to represent you—a Douglas fir committee—who give us a certain kind of information upon which we bank and upon which we base our policy, and if that does not reflect conditions there it seems to me that we have got to discard that and go behind that information.

Senator JONES. Have we such a committee?

Mr. PIEZ. There is such a committee in Washington, to which we have referred; and we presumed that they were representing the Douglas fir interests.

Senator JONES. Well, do you know whether or not that committee represented——

Mr. PIEZ (interposing). Mr. Brown says that the Douglas fir emergency bureau represented the entire lumber interests of the Pacific coast.

Senator JONES. Well, have they reprsented to you that they can not get lumber to supply these new contracts out there?

Mr. PIEZ. They were apprehensive as to whether they could get it in time without interfering with the program we are already carrying out.

Senator JONES. Now, this is the first time I have ever heard anything of the kind suggested. Is that emergency fir board here now?

Mr. PIEZ. I do not know. They are either in the Munsey Building—are they not, Mr. Brown? Mr. Brown was over there, and he keeps in close touch with them, just as he does with the Southern Pine Association. We have been operating with those two committees or bureaus to keep ourselves advised as to the conditions on the two coasts.

Senator JONES. Have you conferred with them about this?

Mr. PIEZ. I have not personally; no.

Senator JONES. How did you know whether to adopt this policy or not if you had not conferred with them?

Mr. PIEZ. Mr. Brown has conferred with them: and I relied upon him to get the necessary information, because that is within his department.

Senator JONES. Do you not think that is a rather serious matter, and that before determining a question of that sort, that will cut down our shipbuilding and stop our shipbuilding, you had better be sure that you have got the facts in the case?

Mr. PIEZ. Pardon, me, Senator Jones, but we have not announced any policy that is cutting down our shipbuilding.

Senator JONES. You just announced a policy that will cut it down—that will stop it.

Mr. PIEZ. Whatever stoppage there has been has been merely temporary.

Senator JONES. Well, a temporary stoppage is still a stoppage.

Mr. PIEZ. Well, there is not a single way out there that is wanting a ship now.

Senator JONES. Yes, there is; this company is waiting for a telegram now, and is ready to start in the very minute it is given the contract to build ships.

Mr. PIEZ. There is a question with this company with regard to the price.

Senator JONES. That is not the proposition——

Senator NELSON (interposing). As I understand, they are asking a good deal more than they got for the four contracts they have?

Mr. PIEZ. They are asking more than other shipyards are asking at this time. They want about 10 per cent more than we have been placing contracts for with other yards on the West coast. We have been trying to keep those yards going, but we must exercise some supervision of the prices that they quote.

Senator JONES. Certainly; I do not want you to pay any price that they may ask. But I am satisfied, from what I know of this company, that it will do this work for just about as low a price as it can possibly be done for.

Now, you base your new contracts on this new wage scale, do you not?

Mr. PIEZ. Yes, sir.

Senator JONES. According to Mr. Rhodes, it is very difficult to determine accurately what those increases entail. Do you recognize that fact?

Mr. PIEZ. There is some difficulty, of course. But the wage advance has been on the basis of a certain percentage of the then-existing rates, and I think it is possible for an experienced estimator to estimate the additional amount required for labor.

Senator JONES. Have you passed on his last proposal?

Mr. PIEZ. The matter has been up; the question of price held it up. I have not passed on it, because until the price is satisfactory it does not come to me.

Senator JONES. Well, if the price is satisfactory, will you give the contracts for those ships?

Mr. PIEZ. I would certainly favorably consider it, Senator Jones.

Senator JONES. Well, is there any reason, now—any reason based upon facts that you have—why, if the price is satisfactory, the contract should not be let?

Mr. PIEZ. There is this lumber reason; yes.

Senator JONES. You think you have sufficient facts, with reference to that, to justify you in holding up contracts of a shipyard that has shown, by the work as it has progressed thus far—which, I understand, is satisfactory to you—that they can do good work, when they are ready to enter into a contract that will insure you 12 ships this year; you think you have facts that will warrant you in holding up and delaying the letting of such contracts, do you?

Mr. PIEZ. For a little while; yes.

Senator JONES. You have let a contract to the Wright Shipyard Co. for two additional ships, have you not?

Mr. PIEZ. Yes. We have not finally closed that.

Senator JONES. Well, you have promised to give them those ships?

Mr. PIEZ. Yes, sir.

Senator JONES. Why did you not promise to give them four? They wanted four; and they had options at one time for four additional ships. Now, they find that they will get two. Why not give them four? They claim that they have ample facilities for constructing four, and that they can do better under a contract for four than they could if restricted to two.

Mr. PIEZ. The whole policy, Senator Jones, of holding up contracts, or letting them, after very considerable thought and investigation of the circumstances, is due to the fact that we have made, well, despairingly slow progress on the construction of our entire wood program; and I think we ought to be permitted to consider our entire program and the progress made on that rather than consider the progress at one particular yard, which may, if properly investigated, simply gain speed at the expense of the progress of other yards.

Senator JONES. Why, certainly. I would not want you to retard other yards, but I do not want you to cut down the building of ships in yards where they show they can do the work until you are certain that that work restricts other yards; and you have not presented here any reason that is very satisfactory to me in that regard.

Mr. PIEZ. Well, I think we have done that. I think our policy is sound, with the information we have. We are not going to keep any shipways idle—certainly not any yards that are producing ships; but we are not going to start any new construction work if we would have to stop any work that is on the ways. We have about 130 ways on the Pacific coast. They ought to produce 260 hulls a year. We have over 200 ways on the Atlantic coast and many on the Gulf coast.

Senator JONES. Yes. You are not having any delay on the Pacific coast, are you?

Mr. PIEZ. No; but we have not made such astounding progress, even there.

Senator JONES. I know; but you are going to delay the work on the west coast, where there is not any delay, in the hope of speeding up in the East.

Mr. PIEZ. Well, we have got to.

Senator JONES. Well, that is the idea, is it?

Mr. PIEZ. Yes; because progress has been made in the East; the hulls are partly built. I visited three shipyards last week, and everyone of them was held up for lumber. We have got the transportation situation also, of course, at the present time to consider.

But we have made very serious demands on the available large timber of the West for immediate shipment.

Senator JONES. Well, have you any reasonable assurance as to when you are going to have these timbers transported across the country?

Mr. PIEZ. Well, we have—about how many have we under way, Mr. Underwod? We have an equivalent of 50, have we not?

Mr. UNDERWOOD. Fifty what?

Mr. PIEZ. Fifty schedules from the Pacific coast thus far?

Mr. F. A. BROWNE. About fifty. But they are none of them complete schedules.

Mr. PIEZ. I know. But the equivalent of how many schedules have been shipped or delivered from the Pacific coast?

Mr. F. A. BROWNE. None of it has been delivered on the Atlantic coast as yet.

Mr. PIEZ. No; but I said "shipped." There is a very considerable amount of it under way, is there not?

Mr. F. A. BROWNE. About half of it.

Mr. PIEZ. Yes; about half of it.

Senator JONES. About half of it is on the way?

Mr. PIEZ. Yes.

Senator JONES. So you have gotten about half of your 50,000,000 feet out of the woods and actually on the way to the East?

Mr. PIEZ. Yes; but a great many of these contracts have been held up since last June or July.

Senator JONES. Well, have you had any one out there tell you that there would be any delay on the part of the lumber mills in furnishing the other 25,000,000 feet as fast as you have transportation available?

Mr. PIEZ. No; but if we place contracts for additional schedules on the Pacific coast, that may interfere with it.

Senator JONES. But you have not any information upon which you base that fear, have you?

Mr. PIEZ. Well, we have the general statement made to us as to the available supply on the Pacific coast. All we can base our broad policy on is whether there is lumber enough to take care of more than 400 ships a year, or 500 ships a year, or 350 ships a year.

Now, our information leads us to believe that there is not enough lumber for more than 400 hulls every year, East and West. We have got under contract that many to-day. Now, an individual yard, by reason of favorable conditions, may be able to crowd out a greater number. It is our policy to assist those yards that can turn out ships immediately, because we realize that immediate tonnage is what we want above everything else; but we can not stop progress in many yards in the East simply to encourage temporary existing yards in the West. We are going to try to encourage the yards, both East and West.

Senator JONES. Well, do you think 50,000,000 feet will keep the yards in the East going?

Mr. PIEZ. If they get it; it will not keep them very long.

Senator JONES. Well, is that not all that you are contemplating getting out there?

Mr. PIEZ. Yes; we are dependent for the rest on the South.

Senator JONES. Well, I am not questioning that you will get it. But you were only contemplating getting 50,000,000 feet from the West, and you have 25,000,000 feet of that on the way East now?

Mr. PIEZ. Yes, sir.

Senator JONES. And you have not had any information from the lumber mills out there that they can not get the lumber out for you just as fast as you want it, have you?

Mr. PIEZ. No; but we have had to lay an embargo to get it.

Senator JONES. An embargo on what?

Mr. PIEZ. On the delivery of large timbers.

Senator JONES. An embargo against whom?

Mr. PIEZ. Against outside users, which shows that we are almost up to the present capacity of that region.

Senator JONES. Well, I do not think it shows that at all.

Mr. PIEZ. The information that comes to us, Senator Jones, is that you have not as many men in the woods on the Pacific coast as are necessary: lumbermen would like to increase their cut out there to four billion feet a year; but at present they have got three billion feet; and they have got to increase the number of their men in the woods in order to get out what the War Department and the Shipping Board will require. We have conferred with the War Department a number of times, and we know that they have to have large timbers also, for their own construction; and we are endeavoring to arrange the embargo so that it will be convenient both to us and to the War Department. And every conference that we have had with them indicates that they have not any great, big, inexaustible supply of the kinds of timber that we will need for this construction.

Senator JONES. Well, I do not know where you got any information of that kind with reference to the Pacific coast. I am satisfied that this emergency board of the Pacific coast has not given any information of that character to anybody—but if they have, I would like for them to come before this committee and tell about it.

Mr. PIEZ. The statement was made, Senator Jones, that only about 7½ per cent of the entire cut is available for us—I mean for these exceptionally large timbers; you have got to cut the small timbers with the large timbers, of course.

Senator JONES. I understand that.

Mr. PIEZ. And that imposes a limit itself.

Senator JONES. Oh, yes; I understand that, too; it is a limit that will not be reached with your shipbuilding plans.

Mr. PIEZ. Now, we did realize the urgency of this thing. Mr. Howe and Mr. Beale have gone out there——

Senator JONES (interposing). Who is Mr. Howe?

Mr. PIEZ. He represents the Aircraft Production Board.

Senator JONES. He is going out there on the aircraft proposition, is he?

Mr. PIEZ. Yes; but we are going to straighten out the difficulties and tangles that we have between ourselves and the Aircraft Board.

Senator JONES. Yes; I find that you have some difficulties——

Mr. PIEZ (interposing). We say that they are interfering with our production, and they say that we are interfering with their production; and both of us are now trying to arrive at an amicable solu-

tion. But they are using considerable fir themselves, because they have not been able to get spruce enough for their needs.

Senator JONES. Well, I want to suggest that, if your organization or the Aircraft Production Board organization, or any other organization interested in getting out timber, will just take the matter up with the men out there who know the conditions in the woods and in the lumber mills, and how to get lumber out, and if you will coordinate your work the result will be that you will get it out much faster than you will by sending out men who do not know anything about those conditions out there. And I would like for that suggestion to be considered by those different organizations.

Mr. PIEZ. Yes; I will be very glad to consider that.

Senator JONES. And I hope you will make some use of it. Because we have men out there who know the conditions, and know how to get the timber out; and if you get two or three of them together and tell them what you want they will get it out quickly.

Now, coming back to the Wright shipbuilding proposition. That is a yard that has one of your contracts, and according to the report it is getting along satisfactorily, and you have given them two more contracts. Now, they say that they can carry on their work better if they have four contracts. And here is the Tacoma Shipbuilding Co.; they are confronted with this proposition: They have had men representing other governments coming to them and wanting them to take contracts for ships, of the same size that we are building, as well as other sizes, and those men offer them higher prices. You will not let them have contracts, and they can not take contracts for those other people.

Mr. PIEZ. We will not let them take contracts with others because we are afraid that contracts for the same size vessels will interfere with our timber situation.

Senator JONES. Of course it would.

Mr. PIEZ. We have been very willing to permit contractors to construct vessels smaller than ours, which require smaller timbers, subject only to the charters of the United States Shipping Board; and we have endeavored to encourage the construction of smaller ships, largely because we feel that ultimately we have got too many ways for our own needs, and we want to encourage private interests to construct vessels.

Senator JONES. Now, will you assure those people that if they take contracts for ships of 2,500 or 3,000 tons those ships will not be commandeered; that they can go to any flag?

Mr. PIEZ. We can not possibly assure them of that.

Senator JONES. Well, then, of course you can see that they can not take these contracts, and therefore you stop them entirely. Do you think that is wise?

Mr. PIEZ. We are granting quite a number of permits. I have an application for a permit here. I do not know whether that has been submitted to the committee yet. It is an "application for permission to construct a ship for private account," and it shows all the conditions which are imposed by the Shipping Board where these permits are granted.

The CHAIRMAN. I think it will be a good thing to have that form of application for permission to construct a ship for private account inserted in the record at this point.

(The form referred to is here printed in full, as follows:)

APPLICATION FOR PERMISSION TO CONSTRUCT A SHIP FOR PRIVATE ACCOUNT.

(Two originals are to be executed, one to be retained by the United States Shipping Board, the other to be returned to the applicant. Before making application please note the following as the policy of the board and the Fleet Corporation: No permits will be granted for the construction of steel ships of 3,500 tons dead-weight capacity and upward. Applications to build steel vessels of less than 3,500 tons or to build wooden ships will be determined on the basis of the priority needs of the Government, as affected by the situation of the yards and the demand for material and labor. Preference will be accorded to applications to construct for citizens of the United States.)

---------- (hereinafter called the Shipbuilder),
(Name of shipbuilder.)
with offices at ----------, hereby applies to the United States Shipping Board (hereinafter called the Shipping Board), and to the United States Shipping Board Emergency Fleet Corporation (hereinafter called the Fleet Corporation), for permission to construct, at its shipyard located at ----------, a ---------- ship of
(Material and rig.)
---------- dead-weight capacity, in accordance with the terms and specifications submitted herewith.

The ship is to be constructed for the account of ----------
(Person for whom ship is to be constructed.)
(hereinafter called the Owner), a citizen of[1] ----------
whose office address is ----------, under a contract executed in triplicate, of which one of the originals duly executed is attached hereto and made a part of this application.

In consideration of the granting of such permission, the United States, represented by the Fleet Corporation, shall have the option at any time prior to the completion of said vessel to purchase said vessel, together with all materials, machinery, equipment, and outfit embodied in or acquired for said vessel, at a price equal to the actual cost thereof to the builder, plus 10 per cent.

In consideration of the granting of such permission the United States, represented by the Fleet Corporation, shall have the option at any time prior to the completion of said vessel to take over said vessel, together with all materials, machinery, equipment, and outfit embodied in or acquired for said vessel, reimbursing the owner for all payments theretofore made under the contract plus interest at 6 per cent from the date of any such payment, and paying to the builder all unpaid installments on said contract as the same shall from time to time become due.

We agree that there have been inserted in said contract, and that the same are hereby made a part thereof, the following clauses:

(*a*) "That for the purpose of securing the approval by the United States Shipping Board of the permission to construct the said vessel, the undersigned hereby covenant and agree with the said board and with each other that this contract shall be unassignable and that no rights shall accrue thereunder to any person by virtue of any assignment thereof, whether by act of the parties or by operation of law, unless the United States Shipping Board shall approve of such assignment.

(*b*) "That both during the course of the construction of the said vessel and after completion the parties hereto authorize the United States Shipping Board to exercise over the said vessel the same authority which it is authorized by law to exercise over vessels that have been registered or enrolled and licensed under the laws of the United States, and hereby agree to acquiesce in the exercise of such authority and to conform to any orders made with re-

[1] In this connection attention is called to the definitions of a citizen of the United States contained in the shipping act, in the following terms:

"That within the meaning of this act no corporation, partnership, or association shall be deemed a citizen of the United States unless the controlling interest therein is owned by citizens of the United States, and, in the case of a corporation, unless its president and managing directors are citizens of the United States and the corporation itself is organized under the laws of the United States or of a State, Territory, District, or possession thereof."

spect to such vessel which the said Shipping Board could lawfully make with respect to any vessel so registered or enrolled.

(*c*) "That upon the completion of said vessel it shall be the property of a citizen of the United States or of a corporation organized under the laws of the United States, or of a State, Territory, or District thereof, and that it shall be documented under the laws of the United States, unless the Shipping Board shall approve of other ownership or documentation.

(*d*) "That upon the completion of said vessel it shall be transferred to a citizen of the United States or to a corporation organized under the laws of the United States, or of a State, Territory, or District thereof, and that it shall be documented under the laws of the United States, unless the Shipping Board shall approve of other ownership or documentation.

(*e*) "That each of the parties hereto waives any and all claim by virtue of any treaty or otherwise with respect to such vessel or contract to any rights or privileges other than those which would accrue to a citizen of the United States similarly situated."

We further agree that no modification of said contract shall be made without the consent of the Fleet Corporation and the Shipping Board.

We agree that work on the said ship shall at all times be subject to the priority needs of the Government with respect to ships; and that in the construction or equipment of the said ship and the purchase of materials therefor we will conform to any order regarding priority of materials or men and rates, standards and conditions of labor, and prices of materials, which the Fleet Corporation may give: *Provided*, That if the result of any such order shall be to increase the cost of said vessel, the United States, upon the exercise of either of the options herein provided, shall add such increase in cost to the amount which would otherwise have been payable under the terms of said options.

We agree, in consideration of the grant of this permission, not to sell or transfer the vessel, or any interest therein, during construction or thereafter, without the approval of the United States Shipping Board, and to procure the vessel to be documented under the laws of the United States, unless the United States Shipping Board shall approve a different documentation.

Upon the acceptance of this application by the Shipping Board and the Fleet Corporation, this application shall be deemed to be a contract binding upon the undersigned.

_____
(Signature of shipbuilder.)

_____
(Signature of owner.[1])

Dated _____, 191__.

_____
(City and State.)

PERMIT TO CONSTRUCT.

To _____

_____

The United States Shipping Board and the United States Shipping Board Emergency Fleet Corporation hereby permit the construction of the ship referred to in the foregoing application.

The United States Shipping Board can give no promise that this vessel will not be requisitioned. Attention is called, however, to the present policy of the board not to requisition the use of vessels under 2,500 tons dead-weight capacity. While it is its purpose to continue that policy, in so far as the exigencies of the situation will permit, it can not foresee what those exigencies may become in the future, and it must, therefore, retain the right to requisition either the title or the use of this vessel whenever, in its opinion, the necessity for such course shall arise.

In so far as the United States Shipping Board can forecast the policy of the future, it anticipates that upon the expiration of the period of the emergency, established by the President's proclamation of February 5, 1917, the vessel

[1] If the ship is not being built for the shipbuilder's own account, the signature of the person for whom it is to be built will be required.

will be permitted to acquire the flag of the country to which the owners, or the holders of the capital stock of the owning corporation, owe allegiance.

Dated: Washington, D. C., _____, 191 .

UNITED STATES SHIPPING BOARD,

By _____.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,

By _____.

Mr. PIEZ. But we realize fully that we must not encourage an industry and then simply stop it from further development, or from operation; and we are being just as gentle and are handling that situation with just as kind a hand as possible, under all the conditions; but above all, we must not interfere with the execution of our own program.

Senator JONES. I do not want you to do that, and it seems to me that when you encourage the building of ships of any size for private account, it will interfere with your program.

Mr. PIEZ. Yes, it would. We have applications for 28 or 30 ships to be built for foreign account in that same district. We could not possibly let a contract like that go through without interfering with our own program; there is no question about that.

Senator JONES. Yes. Now, do you understand that the labor supply is likely to loosen up very much in that neighborhood, by reason of the release of 8,000 or 10,000 men who have been working on the Army cantonments?

Mr. PIEZ. We have not had much labor trouble in any wooden shipyards.

Senator JONES. Mr. Rhodes testified that they are turning men away every day.

Mr. PIEZ. I do not recognize that any labor shortage exists in the wooden shipyards.

Senator JONES. Well, as a matter of fact, not only is there not a shortage out there, but there is, in a way, an over-supply, apparently.

Mr. PIEZ. Those men can, I think, find occupation in the steel yards, because they can very readily acquire the necessary knowledge.

Senator NELSON. Have there not been strikes in the past among the lumber mills in the woods out there?

Mr. PIEZ. There was some difficulty in the woods there, and there is some difficulty now, concerning the number of working hours per day. I think that is under consideration at the present time.

Senator JONES. Well, there is not anything further that you desire to say with reference to the timber, is there?

Mr. PIEZ. No.

Senator NELSON. I remember reading a while ago that there was a strike there in the lumber mills and a stoppage in getting out timber, especially in the lumber for the aircraft—spruce lumber. Do you know anything about that?

Mr. PIEZ. No; I do not, Senator Nelson. I know that there have been some difficulties, and there was an adjudication, I think, of the difficulties out there quite recently.

May I say that there is no possibility of laying down an absolutely inflexible policy on this wooden shipbuilding program, as you can see. There may be favorable conditions in a certain locality that would justify the placing of a contract there, because we feel that they are tapping sources of supply that we have not access to at the present time and that conditions were so favorable and the yard was so well managed that we could count on prompt delivery. If we announced as a broad policy that we would not proceed with the construction of additional wooden ships, that might cut out such yards as that; and yet we have to exercise constant discrimination, because we have from two to five applications for additional wooden contracts almost every day. Is that overstating it, Mr. Underwood?

Mr. UNDERWOOD. No; that is right.

Mr. PIEZ. Now, we can not possibly give consideration to every one of them. We are not encouraging the construction of new yards where we can prevent it, because we feel that the present ways, properly manned and properly supplied with material, will give us a more assured output than increasing the number of ways and diluting the effort and diluting the supply.

Senator JONES. Right in that connection I want to emphasize what I asked of you a while ago, and that is that you get some information——

Mr. PIEZ (interposing). We are going to do so.

Senator JONES (continuing). From men on the Pacific coast who know what the conditions there are as to capacity, and as to whether there is any danger of failure of supply if the existing yards are permitted to construct ships to their full capacity.

Mr. PIEZ. I will be very glad to get that information for you.

Senator BANKHEAD. I want to ask you one question with reference to the lumber supply on the Pacific coast, Mr. Piez. I do not know whether it is a pertinent question or not; it is a matter that I do not profess to know much about. I have had some experience and know something about the difficulty of collecting logs, etc.

Now, what I want to know is this: Is it not likely that the difficulty in getting logs of the size and character that you need is one reason for the delay?

Mr. PIEZ. Yes.

Senator BANKHEAD. For instance, I imagine that only about 1 tree in 20 in a forest would produce the kind of timber that you want, taking the average on the Pacific coast—perhaps it is 1 in 10; I do not know.

Mr. PIEZ. I could not say as to that. I have been in the forests there, but I could not say as to that.

Senator BANKHEAD. I have been there, too. I would suppose, Senator Jones, that if you were to go out in the forest there and cut logs such as you want for those heavy timbers you would not find more than 1 in 10 or 15 trees in that forest that would be of suitable size for you to use; therefore you would have to cover a very large area of country in getting the timber you wanted. And that makes it very expensive, the logging and getting it to the mills; and very frequently it requires the extension or building of logging railroads into a new territory to get that timber out. Is that not true?

Mr. PIEZ. Yes; that is actually the case, because I think the War Department has authorized the construction of additional railroad facilities into certain sections.

Senator BANKHEAD. I have no doubt that they must build additional roads from the sawmill into the place where the timber has been cut before they could get it out, and it occurred to me that that was one of the difficulties that you may have had.

Mr. PIEZ. The difficulty is rather in the logging than in the cutting or the sawing.

Senator BANKHEAD. Yes; when you get your logs into the mill you can cut them fast enough to supply the demand, probably; but I think the trouble is in getting your logs to the mill very largely; that is probably the principal cause of the delay in getting the lumber, if there is a delay.

Mr. PIEZ. That is very likely the cause.

Senator JONES. In connection with that, I do not remember any testimony having been introduced before this committee showing that there has been any delay on the Pacific coast. The delay here has been on the eastern and the southern coasts. Now, do you remember any delay on the Pacific coast in getting out timber?

Mr. PIEZ. We have been rather generous with the Pacific coast in all contracts that have been let since November; we have confined practically all new letting to the Pacific coast, because we have had the available supply of timber there.

Senator JONES. That is, you have had no delay in getting the timber as fast as you wanted it?

Mr. PIEZ. No delay.

Senator JONES. Well, Senator Bankhead assumed that you had had delays.

Mr. PIEZ. But it was not until we drew on them for this additional supply of timber for the Atlantic coast shipyards.

Senator JONES. Well, you have not had any delay in getting that out, have you?

Mr. PIEZ. It has been slow in getting to the yards.

Senator JONES. That is on account of the transportation, is it not?

Mr. PIEZ. Possibly; it took some time to get it started.

Senator JONES. Well, did you have any unnecessary delay in getting it started; that is, in getting it to your cars? Do you know anything about any complaints from any of your officials that there was any unnecessary delay in the lumber mills or in the woods in Washington?

Mr. PIEZ. Not unnecessary; no.

Senator JONES. Well, then, that simply takes away the argument that Senator Bankhead was working on.

Mr. PIEZ. It took a month to get the order well started there.

Senator JONES. Well, is that an unreasonable time? You can not get it over night anywhere; it takes a little time to cut down those trees; they are big trees.

Mr. PIEZ. Well, we wanted them over night.

Senator JONES. I know; but that, of course, is unreasonable.

The CHAIRMAN. Do you remember when the order was placed there?

Mr. PIEZ. I do not; when was that, Mr. Browne?

Mr. BROWNE. In November.

Mr. PIEZ. Late in November?

Mr. BROWNE. No; about the middle of November.

Senator JONES. And you have about 25 million feet on the way; and you have not any information which would indicate that the other 25 million will not be ready as soon as you get transportation?

Mr. PIEZ. That is apparently substantially correct; yes, sir.

Senator JONES. Well, that shows that there is no delay out on the Pacific coast, then.

The CHAIRMAN. Is there any further statement that you wanted to make in that connection, Mr. Piez?

Mr. PIEZ. No; unless Senator Jones wants some additional information.

The CHAIRMAN. You said a moment ago that you wanted to supplement that general statement of Mr. Hurley as to policy?

Mr. PIEZ. Well, only by whatever the discussion might bring out, Mr. Chairman.

Senator JONES. Where can I find this Emergency Fir Bureau?

Mr. PIEZ. I will get Mr. Browne to ascertain that, and I will communicate with you.

Senator JONES. I wish you would do so, Mr. Piez.

Mr. PIEZ. You apparently want a more representative committee there, if they do not represent the facts correctly.

Senator JONES. I am afraid they do not represent the Pacific coast, Mr. Piez.

The CHAIRMAN. Mr. Piez, you have made a statement of policy with reference to the wooden ships; you might add to that a statement of your general policy with reference to steel ships, so that we will have the two together.

Mr. PIEZ. We will endeavor to confine all new contracting for steel ships to existing yards; to expand those yards, rather than to construct new ones. We find that it is quite as difficult to get competent management for the yards as it is to get a plentiful supply of experienced labor, because the shipbuilding industry here has expanded so much that the shipbuilders themselves are in sufficient number to man all the yards—I mean shipbuilders of managerial experience. And we have decided to extend existing institutions, taking advantage of the fact that they have, in some degree, the facilities and the management necessary, rather than to encourage new yards.

We have placed contracts that almost absorb our entire fund, and we have asked for an additional authorization.

Senator NELSON. What about the question of steel for the steel ship?

Mr. PIEZ. The question with regard to the steel itself, Senator Nelson, does not seem to be so vital. We are having some anxieties concerning the capacity for turbines; and in the more recent contracts we are specifying reciprocating engines instead of turbines.

Senator JONES. Well, Mr. Piez, you are not holding up the letting of contracts to responsible yards because of the lack of funds, are you?

Mr. PIEZ. Oh, no.

Senator JONES. And you do not propose to do that?

Mr. PIEZ. No; we do not propose to do that.

Senator JONES. You know you can get funds from Congress just as soon as you need them?

Mr. PIEZ. Oh, yes; we are working on that assumption, Senator Jones; but I am simply mentioning that while I am here.

Senator JONES. Yes. Now, I think you have made it perfectly plain, but I want to be sure, because I have some letters on the subject to answer. As I understand it, this is the policy of the board now—that you will not at the present time encourage the construction of new yards for wooden-ship building?

Mr. PIEZ. Yes.

Senator JONES (continuing). And would not consider applications for contracts from persons who have not yards?

Mr. PIEZ. Who have not yards.

Senator JONES. That is what I thought.

Mr. PIEZ. I think that is a very wise restriction.

Senator JONES. I think so. I agree with you on that.

Mr. PIEZ. Because if we have made any mistakes it is in letting contracts to too many yards, because we are having a tremendous difficulty with the management of some of them.

Senator JONES. Yes.

Senator NELSON. Yes; there is where I think you have failed—in scattering too much and letting contracts in a good many places where you ought never to have let them.

Mr. PIEZ. Still, that was done under the pressure to do things quickly.

Senator NELSON. Oh, yes.

Mr. PIEZ. And I understand some of the contracts will probably come back unexecuted, so we can place them at more desirable points.

Senator NELSON. Oh, yes; I assume that it was done in a Christian spirit.

The CHAIRMAN. It probably will work out all right so far as the Government is concerned?

Mr. PIEZ. I think so.

The CHAIRMAN (continuing). Because you are pretty well protected, and if any of the shipyards fail to carry out their contract you can either turn it over to somebody else or make some other arrangement that is satisfactory to you.

Senator JONES. No; I think you are more liable to subject yourselves to criticism for not letting contracts to yards that are now under way and are able to fulfill their contracts than you are from letting too many contracts.

The CHAIRMAN. I believe that is all, Mr. Piez.

Mr. Brown, you were requested to furnish some data when you were before the committee. Are you ready to submit that now?

STATEMENT OF MR. FRANK A. BROWNE, GENERAL PURCHASING OFFICER, EMERGENCY FLEET CORPORATION—Resumed.

Mr. BROWNE. If I may, Mr. Chairman, I would like to amplify Mr. Piez's testimony in regard to the sources of our information as to the supply of lumber on the Pacific coast.

In November our district officer, Mr. Blaine, wired us that on account of logging operations being interfered with during the winter

it was very probable that we would not have a sufficient supply of lumber needed for shipbuilding purposes unless we took some drastic action to conserve for ourselves the supply of large timbers. At that time there was a very large amount of timber being exported.

The CHAIRMAN. Was he your district officer there?

Mr. BROWNE. He was the district officer in Seattle.

Senator JONES. By "export" you mean to foreign countries?

Mr. BROWNE. Yes. So we placed this embargo; and the purpose of that embargo was to conserve to ourselves the largest sizes of timber necessary for shipbuilding purposes. At that same time there was a committee here representing the Douglas fir lumber industry. I might ask Senator Jones if he knows the Weyerhauser interests on the Pacific coast?

Senator JONES. No; I just know that they have interests there.

Senator NELSON. Any amount of them?

Mr. BROWNE. Well, they are probably the biggest timber producers in the United States. Their representatives are among the members of that committee—four or five men.

Senator JONES. Do you know who they are?

Mr. BROWNE. No; I do not; there was a man named Long here.

Senator JONES. Yes; I know Mr. Long.

Mr. BROWNE. And those men, I was told, represented, as well as the industry could be represented, the entire Douglas fir industry of the Pacific coast, and any statement which they made I thought could be taken with full confidence. They did not know at that time that we had this embargo under consideration, but they recommended it without knowing that it was under consideration, stating that they were afraid that we would not get enough lumber for shipbuilding purposes during the winter season unless we took drastic action. Now, those were the sources from which we obtained our information, and we acted on it.

Senator JONES. Well, is that all the information you have obtained from those people?

Mr. BROWNE. That is all the information we have, and I thought that was sufficient.

Senator JONES. Do you think that justifies the position that you take now that you are not going to have big timbers enough to keep the yards that are under way going?

Mr. BROWNE. I think so.

Senator JONES. And you have not made any further investigation, since you made that embargo, as to your possibilities; and you have not had any additional information indicating that you would not have enough timber? Now, if that is all the information that you have, Mr. Browne, it may be satisfactory to you, but I must say that it is not satisfactory to me at all. I do not think it was your action in any way. Now, that is only my own opinion.

Mr. BROWNE. Now, those representatives of the Douglas fir industry differed as to the percentage of the run-of-mill product which would go into shipbuilding; one man said it was 5 per cent; another man said it was 10 per cent. So we thought we would be fair and split the difference and call it 7½ per cent of the total amount of lumber produced which could go into shipbuilding. The estimated production of Douglas fir is 3,000,000,000 feet per year; their capacity

is 4,000,000.000; they claim it is 4,000,00,000; but it has never been reached.

Now, 7½ per cent of that total would be 225,000,000 feet of lumber suitable for shipbuilding purposes. That is equivalent to 140 ships per year, and we have that many under construction on the Pacific Coast.

Senator JONES. Well, do you not think that information based on actual experience and the actual getting out of timber is better than a matter of merely sitting down in an office and calculating percentages?

Mr. BROWNE. The men who came here were, as I understood it, all experienced lumber men, who had spent their lives in the lumber business, and we had every reason to suppose that those people fairly represented the Douglas fir industry.

Senator JONES. Well, I do not question that they did at that time. They came here in connection with a matter of embargo against exports, did they not?

Mr. BROWNE. No, sir; that was not a matter of embargo.

Senator JONES. I understood that that was what you were considering at that time.

Mr. BROWNE. I do not know why they came here; they were here.

Senator JONES. That was what they recommended to you, and that is what it was based on?

Mr. BROWNE. No.

Senator JONES. They recommended to you to stop the exports by embargo?

Mr. BROWNE. Yes, sir.

Senator JONES. That is the recommendation they made. And they have not given you any recommendation since, or have not given you any facts since then, showing that they could not supply those yards that want more ships with the necessary lumber with which to build them?

Mr. BROWNE. They stated that they were afraid that there would not be sufficient lumber. Now, please understand that the wants of the Shipping Board are not the only wants in Douglas fir.

Senator JONES. Oh, yes; I understand that. And they gave you that information when you were considering the matter of an embargo on exports?

Mr. BROWNE. Yes. But, as I stated, they did not even know that we had an embargo under consideration.

Senator Jones. Well, they knew that exports were going out, and that is what they wanted to stop; and they wanted you to issue an embargo, whether they knew you were considering it or not?

Mr. BROWNE. I think probably the export business is very valuable to them, and they would prefer not to have it stopped, provided our program could proceed at the same time.

Senator JONES. Yes; but they would not prefer to have the exports go on at the expense of the shipbuilding industry in this country in war time.

Mr. BROWNE. No; I think not.

Senator JONES. Well, I think I understand your position about that.

The CHAIRMAN. Mr. Browne, you may now submit whatever material you have for the committee.

Mr. BROWNE. You asked me about lifeboats, Senator Jones.

Senator JONES. Yes. That is, I asked you that, to illustrate the method that you use in letting contracts for lifeboats, and things like that, which are necessary for those ships.

Mr. BROWNE. You asked me for a copy of an inquiry on lifeboats—that is, an invitation to bid on lifeboats. I have here a copy of an inquiry for 4,000 metallic steel-keel lifeboats. This is inquiry No. 243, and I will be glad to put it in the record, in case you desire to have it.

Senator JONES. Yes; I would like to have that in the record.

The CHAIRMAN. If there is no objection, the copy of the inquiry of the Emergency Fleet Corporation, dated December 22, 1917, for 4,000 metallic lifeboats will be inserted in the record at this point.

(The paper referred to is here printed in full, as follows:)

INQUIRY NO. 243—24-FOOT AND 26-FOOT METALLIC LIFEBOATS.

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, December 22, 1917.

GENTLEMEN: You are requested to submit proposal either by letter or telegraph on all of or any part of 4,000 metallic steel-keel lifeboats, complete with full equipment, to conform to the requirements of the United States Steamboat-Inspection Service, as outlined in paragraph 11, page 75, of General Rules and Regulations, edition of November 21, 1916, as amended to date, class A-1 lifeboats, for ocean and coastwise steamers. Lifeboats to be 24 feet or 26 feet long, 7 feet 9 inches beam, 3 feet 4½ inches depth.

Each boat shall be fitted with a rudder and tiller, one painter, manila rope 2¾ inches circumference, 30 feet long; one set of rowlocks attached to the boat by separate chains, and one-half set of rowlocks as spares, one rowlock for the steering oar attached to the boat's stern by a chain, and two automatic plugs, in addition to other equipment required by the rules.

You are requested to state the thickness of metal you propose to use for the shell of the boat and its physical properties, fully describe the construction of the hull, tanks, etc., and send with your bid detailed plans of the construction of the boat and a sail plan. Bids shall also state the weight of the boat complete, without equipment.

The Government will supply you with your steel requirements, and you are requested to append to your bid a detailed list of the steel required for one boat of each size, showing size of sheets, gauge, etc., so that the total price of steel materials for one boat may be readily arrived at.

You are requested to state in your proposal whether you are in position to accept a 50 per cent increase in quantity bid on within a period of 60 days after original award.

The proposal must be in the office of the undersigned not later than 10 days from date of this inquiry.

Deliveries.—Bidder shall state how soon after receipt of steel requirements production can be started and total monthly production capacity possible.

Price.—You are requested to make price f. o. b. your works on both 24-foot and 26-foot boats of the dimensions and specification given above, and also state separately the cost of each item of Steamboat Inspection Service equipment.

Very truly, yours,

_____,
Assistant General Purchasing Officer.

Senator JONES. Now, let me ask you this question: You want 4,000 lifeboats. When will you need them?

Mr. BROWNE. The deliveries will be scattered over the year 1918.

Senator JONES. All through the year?

Mr. BROWNE. Yes, sir.

Senator JONES. You will not need very many of them until—about when?

Mr. BROWNE. Well, we will need some of them in about two months.

Senator JONES. Some in two months?

Mr. BROWNE. Yes, sir.

Senator JONES. Then, do you not think, Mr. Browne, that where there is not an urgent necessity for their construction, the wise thing to do to get contracts would be to call for bids—even by publication?

Mr. BROWNE. We did that.

Senator JONES. You did that in this case?

Mr. BROWNE. Yes.

Senator JONES. Well, that was not the method you described in your testimony before, and that was the reason I asked you. You said you wrote letters to different firms—say 75 or 100 firms—stating to them what you wanted and asking them to submit bids. Is that what you mean by "advertising" for them?

Mr. BROWNE. Yes.

Senator JONES. Well, that is not what I mean by "advertising."

Mr. BROWNE. We sent this inquiry to all the people who are known to build lifeboats.

Senator JONES. Yes. Well, why did you not make a public advertisement calling for bids for the construction of lifeboats under the circumstances, instead of picking out certain firms and sending them notices?

Mr. BROWNE. That has never been the policy of the Fleet Corporation. That policy was determined before I had anything to do with it.

Senator JONES. Well, is that the policy that has to be followed in all cases?

Mr. BROWNE. Yes.

Senator JONES. And that was given to you by whom as the policy of the Fleet Corporation?

Mr. BROWNE. The general purchasing officer before I was made general purchasing officer was Maj. Wood—he is now Col. Wood.

Senator JONES. Well, since you came in, has anybody in charge—has the president of the Emergency Fleet Corporation told you that that was the policy he wanted followed in letting these contracts?

Mr. BROWNE. No.

The CHAIRMAN. You mean that has been the practice rather than the policy?

Mr. BROWNE. Yes, sir; it has been the practice.

Senator JONES. Well, do you not think, as a business man, that in cases of that kind, where you do not have to have these things promptly, or within a very short time—where you have ample time to advertise; that is the best thing to do—to advertise and have sealed bids come in from all sections of the country and from everybody interested in the matter?

Mr. BROWNE. I think that opened sealed bids at a certain definite time in public is the most expensive way of doing business.

Senator JONES. How do you get that opinion? Upon what is it based?

Mr. BROWNE. It gives no opportunity to trade.

Senator JONES. Well, you do not have to accept all the bids if they are not satisfactory.

Mr. BROWNE. What are you going to do with the low bidders? For instance, if you do not accept the lowest bid?

Senator JONES. Well, if you think the bid is not reasonable you can reject it and call for new bids.

Mr. BROWNE. But that is a time-consuming practice, is it not?

Senator JONES. Well, when you have plenty of time that does not cause any trouble.

Mr. BROWNE. Two months is not a lot of time.

Senator JONES. Well, you must not assume that you would have to reject all of them every time.

Mr. BROWNE. No.

Senator JONES. In other words, you condemn the general policy employed almost everywhere of public bidding for public work; is that correct?

Mr. BROWNE. I think it is the longest and the most expensive method.

Senator JONES. And the most unsatisfactory?

Mr. BROWNE. I think so.

Senator JONES. Well, of course, if that is your opinion, that is all there is to say.

The CHAIRMAN. How many people did you write to on the lifeboat proposition?

Mr. BROWNE. I think there will be about 100 bids.

The CHAIRMAN. Did you send out specifications?

Mr. BROWNE. Yes, sir; I described fully the method the last time I was before the committee.

The CHAIRMAN. Those are all prepared by Mr. Ferris?

Mr. BROWNE. The specifications are either prepared by him or they are prepared by the purchasing division and approved by him.

The CHAIRMAN. What is the general rule as to that; that is, how many of them has he prepared and how many of them do you prepare?

Mr. BROWNE. Well, I think the purchasing division prepared most of them and had them approved by him.

Senator BANKHEAD. Well, if you were going to advertise for public bids, you would put in a provision that each bidder would be required to give a bond, would you not?

Mr. BROWNE. It is quite customary to do that.

Senator BANKHEAD. And then you would provide for letting the contracts to the lowest responsible bidder, would you not?

Mr. BROWNE. Yes, sir.

Senator BANKHEAD. Well. I can see how you would get into a great deal of trouble about that, because I have had some experience with the Post Office Department in connection with matters of that kind, where they are required by the advertisement to award the contract to the lowest responsible bidder; they frequently gets bids for the furnishing of supplies, and the bidders will accompany their bids with a bond, and at the same time they may never perform the contract.

Mr. BROWNE. Opening bids in public is rather simple where you have a perfectly definite specification For instance, I had consider-

able experience with this thing when I was with the Panama Canal, and in a great many cases the specifications were accompanied by complete detailed drawings. Now, there was only one thing that a man could bid on; that was what was covered by those drawings and those specifications; there was no possibility of a variation. Therefore, every man's bid should be exactly alike, and they were exactly comparable.

But where you are buying articles which are not covered by drawings and specifications, and where each man's product differs from all the others, you run into this condition, that the easiest way to make up a specification is to go out and copy some man's design—that is, copy it as regards the specifications—describe it fully; and then you get bids, and you are confined to one bidder, and all the other bidders seriously object because their product is excluded. That is quite a common complaint with Government specifications.

The CHAIRMAN. How many of those boats are of the same type?

Mr. BROWNE. Those lifeboats?

The CHAIRMAN. Yes.

Mr. BROWNE. They are all exactly alike.

The CHAIRMAN. They are all alike?

Mr. BROWNE. Yes, sir.

The CHAIRMAN. They are of steel, are they?

Mr. BROWNE. Yes, sir. But we do not offer the design of boat; that is, we do not send any drawings with those specifications; the boats must be built to conform to the requirements of the Steamboat-Inspection Service; that is required by law in the case of ships flying the American flag.

Senator NELSON. Mr. Browne, do you know anything about whether any contracts have been let, or what arrangements, if any, have been made for building barges on the Mississippi River?

Mr. BROWNE. I do not know anything about that; no, sir.

Senator NELSON. Is there anyone here from the Shipping Board who knows about that?

The CHAIRMAN. Mr. Donald is present, Senator Nelson. Can you answer the question, Mr. Donald?

Mr. DONALD. I understand that there were some negotiations going on with the——

Senator NELSON (interposing). I understand that you set aside a certain amount of money for building barges?

Mr. SISLER. $3,600,000.

Senator NELSON. $3,600,000? And who is to carry that work on?

Mr. SISLER. Gen. Black, the Chief of Engineers.

Senator NELSON. Of the Army?

Mr. DONALD. Yes, sir.

Senator NELSON. It is to be done by the Engineering Department of the Army?

Mr. SISLER. Yes, sir.

Senator NELSON. And are you to turn over the money to them?

Mr. SISLER. No money has been turned over yet; it has simply been set aside and made available.

Senator NELSON. You made it available for them, but you do not know what they have done?

Mr. SISLER. They have simply made their preliminary preparations.

Senator NELSON. They have not made any contract?

Mr. SISLER. No.

Senator NELSON. That is for 24 barges, I believe?

Mr. SISLER. Twenty-four barges and six tugs.

Senator BANKHEAD. Are they steel barges?

Mr. SISLER. Yes, sir.

Senator NELSON. And the appropriation for them is $3,600,000?

Mr. SISLER. Yes, sir.

Senator BANKHEAD. What is the capacity; how many tons do they carry?

Mr. SISLER. That has not been determined.

Senator NELSON. That would include the Ohio and the Tennessee. and all rivers connected with the Mississippi?

Mr. SISLER. Yes, sir.

Senator BANKHEAD. What are you going to use those barges for?

Mr. SISLER. To relieve the congestion on the waterways.

Senator BANKHEAD. To relieve the congestion on what rivers?

Mr. SISLER. The Mississippi River.

Senator BANKHEAD. There is no shortage on the rivers.

Mr. SISLER. There is a general shortage.

Senator BANKHEAD. What are you going to handle—coal or grain or what?

Mr. DONALD. I understand it will be principally coal and grain.

Senator BANKHEAD. With regard to the coal, where are they going to get that?

Senator NELSON. On the Ohio River.

Senator BANKHEAD. Well, you can not navigate a boat like that on the Ohio River; that has to be operated by a tug.

Senator NELSON. How deep are they; how much do they draw?

Mr. DONALD. I understand that they only draw 4 or 5 feet—going up to your city, up to St. Paul.

Senator BANKHEAD. That is all right; you may be able to navigate the Mississippi River, but when you come to operate barges carrying a large amount of coal with a tug—and a tug is a thing that draws a good deal of water and goes down a good deal—I do not think you could navigate it on the Ohio River successfully, especially at low tide. So that it occurred to me that you were going to handle coal on the Mississippi River—and I suppose it is for the relief of the situation on the upper Mississippi River.

Mr. DONALD. Yes.

Senator BANKHEAD. The question I had in mind, however, is where you are going to get the coal.

Senator NELSON. They propose to carry the coal from Illinois and Ohio up the upper Mississippi River, and then take iron ore back, shipping it from Duluth and St. Paul down the river; take the iron ore down to St. Louis from our mines; and then take grain, if they can get it, to New Orleans; that would include wheat to be sent abroad.

Mr. BROWNE. You can use one of those stern-wheeled towboats. and they will float on a heavy dew.

Senator NELSON. And then take grain—wheat—if they can get it to New Orleans for shipment abroad?

Senator BANKHEAD. There is a great difference between a tugboat and a barge.

The CHAIRMAN. And coal on the Tennessee?

Senator BANKHEAD. There is not coal enough on the Tennessee. You can take it by rail and get along better.

Senator JONES. What I wanted to get at is this: In this proposal here for these lifeboats, which is dated December 22.

Mr. BROWNE. Yes, sir.

Senator JONES. And you say the proposal "must be in the office of the undersigned not later than 10 days from date of this inquiry"?

Mr. BROWNE. Yes, sir.

Senator JONES. And you send these out by mail. Did you expect to get a bid from the Pacific coast in that length of time?

Mr. BROWNE. Why, I think, if anybody builds boats, that they can make up an estimate of that sort of boat in a very short time. We furnish all material; they do not have to take care of the material.

Senator JONES. You did not know anything about that—that it took a letter from 8 to 10 or 12 days to get out to the Pacific coast?

Mr. BROWNE. No; I did not know that.

Senator JONES. You did not keep track of the delays in the mail that occur by reason of floods and things like that?

Mr. BROWNE. No; I thought it took about five days.

Senator JONES. It does, ordinarily; sometimes it will take four. But we had some unusual conditions out there, and those ought to be taken into account at this time of year.

Mr. BROWNE. Well, now, that inquiry was actually sent out December 28.

Senator JONES. It is dated December 22.

Mr. BROWNE. Yes.

Senator JONES. And it says, "must be in the office of the undersigned not later than 10 days from the date of this inquiry," or from December 22.

Mr. BROWNE. Not particularly for those reasons, but for the reason that some people ask for additional time; that thing has been held open until the present time, so as to give everybody an opportunity.

Senator JONES. That may be true, but if they comply with your notice, if they follow the language of your notice, they must have these bids in there not later than 10 days, and if you want to reject anybody because they are not in you can do it.

Mr. BROWNE. As a matter of fact, we do not do it.

Senator JONES. Do you not think you ought to have a pretty definite policy with reference to these things?

Mr. BROWNE. We have a definite policy.

Senator JONES. Do you not think that if you send out notices of this kind and a bid comes in and you open it up, and then somebody sends in a bid 15 days afterward, that you could favor that one, if you wanted to?

Mr. BROWNE. We do that.

Senator JONES. Do you not think that opens the door to a whole lot of such favoritism?

Mr. BROWNE. No.

Senator JONES. You do not?

Mr. BROWNE. No.

Senator JONES. Do you not think that you ought to take into account the different distances of the country in sending out notices like that, and give those in one section a little more time to get their bids in than others had?

Mr. BROWNE. That simply delays the closing up of the bids.

Senator JONES. You have just said you do not make it absolute; you keep it open if you want to, and if you do not you do not?

Mr. BROWNE. This 10 days is put in there as an indication that we are in a hurry to get in the prices. We do not close in 10 days, because we find, as a rule, a lot of people come in late for one reason or another, and they can not get in their bid, but we placed a short time on it intentionally so as to make people hurry up and make people get their bids in there.

Senator JONES. Do you not think that that also has a tendency to keep people from bidding who might otherwise bid?

Mr. BROWNE. I do not think so.

Senator JONES. You do not think that a man at Tacoma, for instance, who gets a notice to-day that is mailed out nine days before that unless he gets his bid down here within one day that it will not be considered, that that would deter him from submitting any bid at all?

Mr. BROWNE. I do not think so. He could wire us and ask us if we would not hold it open for a few days longer.

Senator JONES. Is there anything in this that would indicate you would consider a plea of that kind?

Mr. BROWNE. No.

Senator JONES. If that is going to be your policy, do you not think in these notices you had better say something of that kind?

Mr. BROWNE. It might be wise to do that.

Senator JONES. I think it would be wise, or else give them ample time. I think you ought to put a limit within which these bids are to come in, but I think you ought to give more time to one section of the country than another. If all these bids must be here in Washington City, it seems to me you ought to give the Pacific coast a little bit more time to get their bids in than you do New York; but you ought to have a limit, I think, on each one, and I think you ought to adhere pretty closely to that limit, unless you are going to encourage people to come in after the time you have set, and all that sort of thing. I think that is unwise myself, Mr. Browne.

Well, now, these lifeboats, some of them are to be put in vessels on the Atlantic coast and some of them are to be put in vessels on the Pacific coast?

Mr. BROWNE. Yes.

Senator JONES. Then under this proposition here all these lifeboats could be built in the City of New York?

Mr. BROWNE. Yes, sir.

Senator JONES. And then you would transport across to the Pacific coast those needed there?

Mr. BROWNE. We could do that.

Senator JONES. Is that what you contemplate doing?

Mr. BROWNE. No, sir.

Senator JONES. Why do you not call for bids on the Pacific coast for lifeboats that you expect to use there, and then bids for lifeboats that you expect to use on the Atlantic coast?

Mr. BROWNE. We could do that.

Senator JONES. Why did you not? Did it not occur to you to do that?

Mr. BROWNE. Well, there is always an opportunity to get a low figure by making the quantity very large. This is a very large quantity of lifeboats.

Senator JONES. Yes; I know that.

Mr. BROWNE. If the proposal was sufficiently attractive on account of this quantity we might get a low-enough price from somebody, say, on the Atlantic coast so that we could afford to supply the Pacific coast and ship them, provided we had the necessary transportation facilities; and, vice versa, we might have a price from the Pacific Coast which would allow us to ship them to the Atlantic coast.

Senator JONES. Do you think it is possible for them to submit bids for the construction of these boats with such a difference that it would warrant you in shipping the completed boats by freight clear across the continent?

Mr. BROWNE. Yes, sir; there is no doubt about that.

Senator JONES. There may not be in your mind. I do not think it is very probable, do you?

Mr. BROWNE. I think it is quite possible.

Senator JONES. Well, have you got proposals in under that?

Mr. BROWNE. Yes, sir.

Senator JONES. Have you got any proposals that warrant anything of that sort?

Mr. BROWNE. I do not know.

Senator JONES. Have you examined them yet?

Mr. BROWNE. They are being examined now.

Senator JONES. Have you got bids from companies on the Atlantic for all these 4,000 boats—I mean, for instance, one firm bidding for the construction of all thees boats?

Mr. BROWNE. I do not know; I have not examined the bids myself.

Senator JONES. Do you not think it would be wiser to give an opportunity for bidders on the Pacific coast to bid on boats to be built for ships there, and bidders on the Atlantic coast an opportunity to bid on lifeboats to be delivered to the Atlantic coast without involving transportation across the country in the completed form?

Mr. BROWNE. It is our policy to award contracts on the Pacific coast for material to be used there, when there is not too great a difference in price, but after you have taken freight into consideration.

Senator JONES. But there is nothing in this proposal to indicate anything of that kind.

Mr. BROWNE. No. In other words, if we put that in there it would merely offer a temptation on the part of a man on the Pacific coast to add the freight to whatever price he put in.

Senator JONES. You could put out an alternative proposition, could you not, very easily?

Mr. BROWNE. What sort of an alternative proposition?

Senator JONES. The proposition you have here and then this otner.

Mr. BROWNE. You mean——

Senator JONES. So that if you got a bid on the Atlantic coast for building all of them under which you could afford to ship them out, you could let it to that man; that would not be a difficult matter, would it?

Mr. BROWNE. Our proposal calls for "all or in part"; it is very doubtful that we should place all the business in one locality, because, as I say, the policy to award the contracts on the Pacific coast for machinery or material to be used on the Pacific coast; and the statement "all or in part" permits us to split this order in any way we please.

Senator JONES. Oh, yes; I understand that, that this permits you to do it.

Senator NELSON. Does not the steel material for those boats all have to come from the East?

Mr. BROWNE. Yes, sir.

Senator NELSON. There is none of it manufactured on the Pacific coast?

Mr. BROWNE. None that I know of.

Senator JONES. Yes; but it is much cheaper to ship it out there in what you might call the raw material form than it is in the boat form, is it not?

Senator BANKHEAD. They could ship it through the Panama Canal?

Mr. BROWNE. Without doubt.

Senator BANKHEAD. Yes; but not now, while this emergency is going on.

Senator NELSON. They would probably get it as quick through the canal as by the transcontinental railroads?

Senator JONES. Yes; but they have not got the ships to take it through.

The CHAIRMAN. Does this contemplate delivery to the Fleet Corporation at the plant f. o. b.?

Mr. BROWNE. The price is based on delivery f. o. b. the manufacturing point; yes, sir.

Senator NELSON. Let me ask you now, Mr. Browne, what you are going to do with these lifeboats; are you going to assign them to the respective ships?

Mr. BROWNE. Yes, sir.

Senator NELSON. You are going to assign a specific quota to these ships that you are building for the Government?

Mr. BROWNE. Yes, sir.

Senator NELSON. And these requisitioned ships?

Mr. BROWNE. Not the requisitioned ships—the ships under direct contract.

Senator NELSON. You are going to assign these lifeboats to those ships?

Mr. BROWNE. Yes, sir.

Senator NELSON. In proportion to their size and needs?

Mr. BROWNE. Yes, sir.

Senator NELSON. And it will be considered as a part of the equipment of those vessels?

Mr. BROWNE. Yes, sir.

Senator BANKHEAD. How many lifeboats are required for those ships?

Mr. BROWNE. The law provides for that.

The CHAIRMAN. Is there any other matter?

Senator JONES. I just want to suggest to Mr. Browne that in calling for proposals of this kind hereafter that you divide the country up into districts and give those farther away a little longer time in which to submit their proposals than those nearer. At any rate, I am interested especially—I am interested in all sections of the country—in the Pacific coast.

Mr. BROWNE. Do you think 15 days would be sufficient time for the Pacific coast?

Senator JONES. I think, unless it is a very urgent matter, unless it is something that has to be acted upon very quickly, that you ought to give at least 20 days for the Pacific coast. Of course, where it is a matter of emergency, where you have got to act quickly, then you can not do it.

Mr. BROWNE. Of course most of these things are emergency, because if we got lifeboats in two months, for instance, under the present transportation conditions, it may take a month to get material to the coast; it may take two months. We do not know how long it is going to take.

Senator JONES. That situation is not confronting you very strongly here. Most of these lifeboats you are not going to need in two months. The greater part of them you are not going to need until the latter part of the year. You may need some of them earlier, but it seems to me that even in this case you could have given much more time to the Pacific coast in which to get bids in.

Then I also want to suggest to you that where you have to get material or instruments, or whatever it may be that can be manufactured on both coasts, that you call for bids or proposals, for instance, on the Pacific coast for everything that is needed on the Pacific coast and on the Atlantic coast for everything that is needed on the Atlantic coast; and then you can put in a blanket proposition like this, too, under which a man on the Atlantic coast can bid on all of them, to be delivered wherever you want them. I offer that as a suggestion.

Senator NELSON. I also want to supplement that by asking you to take into account the Lake Superior region.

Mr. BROWNE. Yes, sir.

Senator JONES. And I indorse that suggestion; I think it is good.

Senator NELSON. I knew you would.

Senator JONES. I think that is all I want to ask Mr. Browne.

The CHAIRMAN. Is there anything else you have for us?

Mr. BROWNE. No, sir.

Senator JONES. Here is a letter which Mr. Browne sent me in answer to a question I asked him when he was on the stand some little time ago, about the furnishing of lumber at $30 a thousand, and by what yards it was furnished. I expected that he would put that in his testimony then, but I judge you did not do it, Mr. Browne?

Mr. BROWNE. I suggest that that be put in now.

Senator JONES. Yes; I wanted to put it in the record. It came out in the testimony the other day that this Coos Bay Shipbuilding Co. is the company building these Hough boats, and they call for shorter

timber than these others; and I do not know whether the Kruse & Banks Shipbuilding Co., at North Bend, is building that class of boats or not. I am inclined to think that it is, and that is the reason for this lower price of lumber.

The CHAIRMAN. That letter may go in.

(The letter referred to is here printed in full, as follows:)

UNITED STATES SHIPPING BOARD,
EMERGENCY FLEET CORPORATION,
Washington, January 14, 1918.

Hon. WESLEY M. JONES,
Senate Office Building, Washington, D. C.

DEAR SIR: When I was on the witness stand before the Senate Committee on Commerce you requested me to furnish you information as to the shipbuilding companies which were receiving lumber from a lumber company, from which we had bought material at $30 per thousand feet, board measure.

The names of the shipbuilding companies are Coos Bay Shipbuilding Co., Marshfield, Oreg., and the Kruse & Banks Shipbuilding Co., North Bend, Oreg.

Very truly, yours,

FRANK A. BROWNE,
General Purchasing Officer.

STATEMENT OF MR. HENRY HOWARD, DIRECTOR OF RECRUITING SERVICE, EMERGENCY FLEET CORPORATION, CUSTOMHOUSE, BOSTON, MASS.

The CHAIRMAN. Mr. Howard, state your full name and address.

Mr. HOWARD. Henry Howard; Customhouse, Boston.

The CHAIRMAN. What are you engaged in, Mr. Howard?

Mr. HOWARD. My regular business is the chemical business; I am vice president of the Merrimac Chemical Co.

The CHAIRMAN. What are your relations with the Emergency Fleet Corporation, or the Shipping Board?

Mr. HOWARD. I am director of the recruiting service.

The CHAIRMAN. What does that involve?

Mr. HOWARD. That involves the training of the entire personnel of the merchant marine; that is, deck officers, engineer officers, the sailors, cooks, stewards, oilers, water tenders, firemen, etc.

The CHAIRMAN. You are giving your personal attention to that work now, Mr. Howard?

Mr. HOWARD. Yes.

The CHAIRMAN. Just state to the committee what you are doing.

Senator NELSON. When did you start upon that work, Mr. Howard?

Mr. HOWARD. I came on here about the middle of April, and brought the matter to the attention of the board at that time, and was finally authorized to start about the 1st of June. We actually got our first school started on June 1, or the first Monday in June.

The CHAIRMAN. Have you had any experience in that line of work before or had to do with the training of men for the sea?

Mr. HOWARD. I have had experience on the sea, and I have been following the sea, not as a professional but as an amateur, since I have been 12 years old.

Senator NELSON. In what capacity?

Mr. HOWARD. As a yachtsman. I studied navigation myself when I was about 22 years old, and had about 20 years' experience on ocean-going steamships; but the work I volunteered to do for the

Shipping Board was the organization and administration of this work.

I think, possibly, if I show you this organization chart [exhibiting blue print to the committee] I can explain the scope of the service. In the first place, I got the assistance of the Massachusetts Institute of Technology in taking charge of the technical end of the teaching in both the engineering and navigation courses. Dean Burton, of the Massachusetts Institute of Technology, was formerly connected with the Coast and Geodetic Survey, and was an expert navigator. He organized and trained the navigation teachers. Prof. Miller, of the steam-engineering department of the Massachusetts Institute of Technology, in a like manner, took charge of the engineering courses. I divided the country into seven sections. They correspond as closely as possible to the sections employed by the Steamboat Inspection Service.

The first section goes from Eastport to the Connecticut River. Each one of these squares [indicating] recommends a navigation school, with the single line, and the double lined ones represent an engineering school.

Senator NELSON. Have you got these schools established?

Mr. HOWARD. Oh, yes; these schools have been in operation four months now.

Senator NELSON. How many have you in that district, for instance?

Mr. HOWARD. In that district there is a school at Cambridge, Mass.; Gloucester, Mass.; Portland, Me.; Rockland, Me.; Providence, R. I.

Senator NELSON. Five?

Mr. HOWARD. Those are the navigation schools. Then there is the engineering school at the Massachusetts Institute of Technology.

Senator NELSON. That makes six.

Mr. HOWARD. In section 2——

Senator NELSON (interposing). Let me ask you, before you proceed, what is the average amount or number of attendance in those schools, if you can tell approximately?

Mr. HOWARD. I can tell you that in the total numbers—when I came from Boston I did not have any idea that I was coming before this committee, so I did not bring that detailed information, but I can tell you that approximately—we get weekly reports from six sections, but the last report showed about 500 students.

Senator NELSON. Of all classes?

Mr. HOWARD. Of all classes in all of our schools, in the navigation, and about 300 in the engineering.

Eenator NELSON. But you speak of "navigation"; do you include the common sailors in that, too?

Mr. HOWARD. No; these are the deck officers.

Senator NELSON. The deck officers and engineers?

Mr. HOWARD. The deck officers and engineers; yes.

Senator NELSON. Have you no school for sailors?

Mr. HOWARD. Yes; I will come to that later.

Senator NELSON. Go on, then; I will not interrupt you.

Mr. HOWARD. The second section is from the Connecticut River to Cape Charles by Norfolk, and that includes a school at Baltimore, Newport News, two schools in New York, another one at Norfolk, Philadelphia, and Atlantic City. Those happen to be in that order, because that is the order in which they were started.

Then, in that section we also have engineers' schools at the Stevens Institute in Hoboken, at Johns Hopkins University in Baltimore, and at Philadelphia. In section No. 3 we have at the present time only one school, that is in Jacksonville, Fla.

Senator NELSON. That covers the territory from Cape Charles down?

Mr. HOWARD. From Cape Charles to Cape Florida. We have had schools in Savannah and Charleston, but used up, for the time being, the available material, so we stopped. But later on we may start them again.

In section 4——

The CHAIRMAN. You have no engineering school there?

Mr. HOWARD. We have no engineering school in that section.

Section 4—I can leave you a copy of this, so that it will not be necessary to read everything—includes the Gulf seaboard from Cape Florida to the Rio Grande. There is a school at Galveston, at Mobile, and at New Orleans, and an engineering school at Tulane University in New Orleans. Section 5 includes the California coast. There is a school at Los Angeles, at San Diego, at San Francisco, and at Eureka, Cal. Section 6 includes Washington and Oregon seaboard. There is a school at Bellingham, Wash.; Portland, Oreg.; and Tacoma, Wash., with an engineering school at the University of Washington in Seattle.

Section 7 includes the Great Lakes, with a school at Buffalo, Chicago, Cleveland, and Detroit; with an engineering school in the Armour Institute in Chicago and in the Chase School of Applied Science in Cleveland.

In order to cut red tape, as far as possible, I have tried to decentralize and put the organization of each section under the management of a competent section chief. The section chiefs are men who are good business men, not necessarily knowing anything about the details of navigation, because those details of teaching navigation are taken charge of by the director of navigation, who has charge of all the teachers. The business administrator attends to the regular business administration, to getting the recruits in and to getting the schools filled, and attending to everything that may come up. Those section chiefs are all men who are more or less prominent men in their communities and are working for $5 a month, as a nominal compensation, and giving a lot of time to the work. Mr. Vaughan is the section chief in Boston. He is a lawyer who has had a good deal of sea experience as a yachtsman for a great many years and in long-distance cruising. Mr. Lewis, of Philadelphia, is section chief of No. 2. He is an admiralty lawyer of wide experience in that end of the business. He is a practical man and has a good deal of practical knowledge, in that he was, before he took on this work, giving lectures in such technical propositions as stowage of cargo and things of that kind. Mr. Hardy Croom, of Jacksonville, Fla., I got through Mr. George Baldwin, of the American International Corporation. He is manager of the Stone & Webster street railway down there, and he is giving this as his war service in the management of that section. In New Orleans the section chief is Ernest Lee Jahncke. Mr. Jahncke is a very well-known man in New Orleans. He has a towing and barge company down there. He is building three or four ships for the Fleet Corporation. He is a man, I

should think, of about 40 years. He is exceedingly able and is very enthusiastic about his work. Mr. Farnham P. Griffiths, of California, is a well-known attorney there.

I got hold of him through Mr. Denman, and he is also well known to Mr. Paige of the Shipping Board. He is a man full of enthusiasm about this work and is doing spendid work out there. By the way, he is one of the men who was selected as a Rhodes' scholar to go to Oxford, and he is an unusually bright man and has shown a great deal of administrative ability in carrying that work out. He is also an admiralty lawyer. William J. Grambs is the section chief of No. 6.

Senator NELSON. That is the Seattle division?

Mr. HOWARD. That is the Seattle division. He is assistant to the president of the Seattle Street Railway Co. I got him through the Stone & Webster organization and through Mr. Baldwin also, who is connected with them, in trying to pick out men in that district who would be suitable. He is doing excellent work there also. Capt. Irving L. Evans, of Cleveland, Ohio, is peculiarly well fitted for this work.

Senator NELSON. He has the Lake district?

Mr. HOWARD. He has the Lake district. Mr. Evans was formerly first officer on an ocean-going boat and was afterwards master of an ocean-going steamer crossing the ocean—I do not remember what line it was on—he then gave up the ocean and studied law, and is now in one of the principal law firms in Cleveland as an admiralty lawyer, so that his training has made him particularly well suited to carry that work out, and he is carrying it out very well indeed.

Senator NELSON. Are these schools open and free?

Mr. HOWARD. They are open and free.

Senator NELSON. And no charges?

Mr. HOWARD. No charges of any kind. We do not admit anyone to them who has not had sea experience. We do not take landsmen in and try to make seamen out of them in a few weeks. We insist that a man shall have had at least two years' sea experience.

Senator NELSON. Do you require an entrance examination of any kind or qualification for deck officers?

Mr. HOWARD. We do not require that to get into our schools, but they have to get it after they leave our schools. We have a very close working arrangement with the Steamboat-Inspection Service. They have cooperated, through Gen. Uhler and his supervising inspectors, in a splendid manner to make this work a success.

Senator NELSON. Though you do not aim to get men in and educate them as sailors, except those who have already gone to sea?

Mr. HOWARD. We are speaking now only of the training of officers, Senator.

Senator NELSON. I mean seamen.

Mr. HOWARD. I have not come to that part of it. That is over here [indicating]. We are only talking now about the officers. We do not train anyone to be an officer who has not had the practical experience as a seaman. It is quite different from what the Navy are doing. The Navy are taking lots of young men who are college graduates and are teaching them navigation, and so forth, irrespective of whether they have had any sea experience, and then they

give them the sea experience as rapidly as they can, and in time they will make splendid officers; there is no question about that. But the emergency we have had to meet was to train men who would at once be competent officers. You can teach navigation in about four to six weeks to anybody of ordinary common education.

Senator NELSON. Who is familiar with mathematics?

Mr. HOWARD. Yes; but that does not make him a seaman or officer; that he has got to learn by experience, and so we do not take anybody who has not had that experience.

The CHAIRMAN. Do you give experience on board ship?

Mr. HOWARD. These men have all had experience before they come to us of at least two years; we do not take anybody who has not had experience.

The CHAIRMAN. You do not have any boats to use in connection with this school training?

Mr. HOWARD. Yes; we have two training ships now and expect to have two more very shortly, but we do not put these officers on them.

The CHAIRMAN. Where are your two ships?

Mr. HOWARD. The two ships at the present time are at Boston.

Men who want to come into this service, we will say, are seamen or firemen or oilers or water tenders who have had a certain sea experience. They have to go to the Steamboat-Inspection Service, to the local inspector, and have their application approved as to experience before we take them in. After that is approved, we take them in and put them through the course, and then they have to go and pass the examination given by the Inspection Service. I was very anxious not to have our own service pass on the qualifications of the men; I wanted some independent source to examine them and pass them.

Senator NELSON. The Steamboat-Inspection Service passes them?

Mr. HOWARD. It passes them, just as they have passed officers for years past. They take the same examination that everybody that is an officer in the service has taken and passed.

As an additional training, we are giving to a very large proportion of our graduates a preliminary training on the bridge of vessels in the capacity of junior officers, as we call them, at $75 a month. They are extra officers. That is, our graduates are put—one or two or three deck officers, maybe—on board an ocean-going steamer, and then one of those officers will stand watch alongside the regular first officer on the vessel; another one alongside the regular second officer; another one with the third officer; and they get that added experience for two months.

Senator NELSON. And you pay them the wages?

Mr. HOWARD. No; the steamship pays them their wages—some of the lines do, not all of them are willing to do it, but some of the lines have been very, very kind and generous in that way in helping to take care of these men and give them that additional education.

The CHAIRMAN. What does this course cost the students?

Mr. HOWARD. It does not cost them anything.

Senator NELSON. Except board and lodging?

Mr. HOWARD. Yes. That we consider very desirable, because it weeds out all of the dead beats. If we paid board and lodging and gave them a free schooling, they might think it was a good way to

take a little rest and a vacation; but a man who has been a seaman and has got money enough saved up to live for four to six weeks while taking that course and uses his own savings for that purpose naturally eliminates all the poor material.

Senator NELSON. What is the average length of time?

Mr. HOWARD. I should say six weeks.

Senator NELSON. Will that make a man a finished navigating officer?

Mr. HOWARD. As an average proposition.

Senator NELSON. Or as engineer?

Mr. HOWARD. Yes; four weeks generally for the engineers. But you must remember that they only go in in the lowest grades, as a rule. They go in as third assistant engineers and as third officers, the majority of them. Some have the necessary experience to be second officers, but most of them are third officers; after that they serve in that lower capacity on the bridge of a vessel, and then are gradually promoted up.

Senator NELSON. You have about how many students of this class here, officers and engineers?

Mr. HOWARD. At the present time there are about 500 of the deck officers and about 300 of the engineer officers, but some of those will drop out; they will not all go through and will not all qualify.

The CHAIRMAN. Is the interest increasing and attendance growing, or is it the other way?

Mr. HOWARD. The attendance is increasing at the present time; on the other hand, we are anxious not to overstock the market with the number of officers; that is, we do not want to encourage men to come in here and then have nothing to do.

Senator NELSON. No places for them?

Mr. HOWARD. No places for them. So that that is a phase of the question that we are watching very carefully. When I first undertook this work, before we got fully going, in the last part of June or the first week of July, there was an acute shortage of officers that lasted about three weeks, just as we were getting started. We overcame that. That shortage, by the way, occurred on the Atlantic Coast, and then it became apparent that they were coming faster than we needed them. So, I called in my publicity and let down on the efforts to get men, so as not to get them in too fast; and I did not start any additional publicity until about the 1st of December. Then I started a little additional to bring in an increased number of recruits against the new ships that were coming out in the spring. But the situation as it is now is well in hand. We can furnish officers and have got a decided surplus at the present time.

The CHAIRMAN. How about the sailors?

Mr. HOWARD. There is just one other part of this scheme here—after the men graduate from here and get their examinations, we do not want to throw them adrift and pay no further attention to them. So we have what we call our Sea Service Bureau, which takes those men and finds positions for them and follows them. We have representatives in the different seaports along here [indicating].

Senator NELSON. You take pains, then, to find employment for them?

Mr. HOWARD. Yes.

Senator NELSON. That is a good plan.

Mr. HOWARD. There is another matter which I want to speak about, and that is that early in the business I found that the attitude of the trade unions and officers' associations, etc., toward our service was going to be a very important matter, and I felt that we ought to take them right into our confidence and get their assistance and cooperation; and to that end I formed an advisory committee, which consisted of the presidents of all of the unions that are connected with the sea service, and we have a meeting of this advisory committee once a month. We talk things over, and suggestions are made. Each member is asked to state his views or give any suggestions he has to make; and then we try to work the thing out to a satisfactory conclusion, and the results so far have been most satisfactory.

Senator NELSON. So you have had no friction with them?

Mr. HOWARD. No; they have been absolutely loyal to this whole thing and are working right along with our service.

Senator CALDER. Pardon me. What are the ages of the men you are training as officers?

Mr. HOWARD. From 19 to 55.

Senator CALDER. You put the limit at 55?

Mr. HOWARD. Yes.

Senator CALDER. These are men, as I understand you, who have had some maritime experience?

Mr. HOWARD. Yes. None come into these schools unless they have had at least two years' actual sea experience on the ocean—not on lakes and bays, but on the ocean.

Senator CALDER. Did you testify how many men you had attending these schools?

Mr. HOWARD. Yes.

Senator CALDER. How many, please?

Mr. HOWARD. You mean how many have already gone through?

Sentaor CALDER. Have gone through and how many you have at the present time?

Mr. HOWARD. At the present time there are in those schools about 500 deck and 300 engineer officers. That is a decided increase over what they had a month or so ago, and as for the total number that have gone through, up to and including December, it was 1,516.

Senator CALDER. Do you have any trouble getting the type of men that make good officers?

Mr. HOWARD. No; we have had no trouble at all in that.

Senator CALDER. You said from 19 to 55. That would take in a good many men of the draft age, as I understand it?

Mr. HOWARD. Yes.

Senator CALDER. Do you take in men who are subject to the draft?

Mr. HOWARD. We have worked out a scheme with Gen. Crowder whereby these men go on the emergency fleet exempted list and stay on that as long as they stick to the sea service; if they should desert from the sea service and go back, they will at once go right into class 1. We think that will work out very satisfactorily.

Senator CALDER. We have a number of men in the nautical schools like the New York and Boston nautical schools. Do you accept their service in nautical schools as a part of the two years' experience?

Mr. HOWARD. There is a regular provision for that in the Steamboat-Inspection Service. Those schools provide an excellent method of training officers, and in times of peace, when we have time enough to do it, probably the very best way, or a very good way, of doing it, but in this emergency that method is absolutely useless, because the Massachusetts Nautical Training School, I believe, has 50 graduates a year, and the New York school about 100, and it costs in round numbers $1,000 per man to train them. It has cost us up to date for our officers up to the end of December—we have not gotten all the accounts in—but I should say it is between $55 and $65 a man.

Senator CALDER. Have you testified how long a time they are required to study in the schools?

Mr. HOWARD. Four to six weeks, until they can pass the examination of the Steamboat-Inspection Service, or else they are no good and are thrown out.

Senator CALDER. Of course they could not do that in six weeks without previous maritime experience.

Mr. HOWARD. No.

Senator NELSON. Do they have to pay at the other schools the Senator spoke of?

Mr. HOWARD. No; those nautical schools are free schools; they are supported by the State of Massachusetts and the State of New York.

Senator CALDER. The New York school is paid for in part by the State and part by the City of New York.

Mr. HOWARD. It is quite a different principle. They take boys from the ages of 16, 17, and 18, and give them two years' training, and not only teach them navigation, but also try to teach them seamanship in that time, and you have got to have a course of that length if you are going to teach them the whole thing. In our emergency it seemed to the committee that the solution of the matter was to take the men who already had the seamanship.

Senator NELSON. And give them the principles of navigation?

Mr. HOWARD. Yes; and which we can do in four to six weeks.

Senator CALDER. Are not New York and Boston the only places they have nautical schools?

Mr. HOWARD. Yes.

Senator CALDER. You think they are a pretty good thing, do you?

Mr. HOWARD. I think they are an excellent thing.

Senator JONES. About what proportion of your graduates come within the draft-age limit?

Mr. HOWARD. I have not any statistics on that.

Senator JONES. Could you make a guess?

Capt. DONNELL. Not more than 40 per cent.

Senator JONES. I was wondering why it would not be a good idea in this emergency to put the ages between 31 and 55, so as not to take in any of those within the draft age.

Mr. HOWARD. It does not amount to anything, when you come to the question of seamen, so that we are purposely taking them in the draft age.

Senator JONES. I can see how you need so many more there.

Mr. HOWARD. And we are doing it in order to hold them, because they are exempted from service in the trenches, and they would a great deal rather serve and to run the risk of being submarined than they would of fighting in the trenches.

Senator CALDER. Are you getting a great many applications for seaman's ratings from the men?

Mr. HOWARD. They are coming in very rapidly; but we are just getting our training ship started, and we have not started any active publicity campaign to get these men, because there I am now building up the organization for training them, and they are coming in and being examined and passing the physical tests about as rapidly as we can assimilate them.

Senator NELSON. What is the method of training you have for sailors?

Mr. HOWARD. We have these two training ships as a starting point; we have 500 or 600 apprentices on each ship. Then we divide those apprentices in accordance with their desires and as to the capacity of the ship as between sailors, firemen, oilers, water tenders, cooks, and stewards.

Then, take the sailors, for instance: The sailors are now divided into squads of 10 each, and an experienced able seaman is put as an instructor in charge of each squad. One of the most important functions of a seaman or sailor to-day is expert lifeboat work in connection with the submarine zone. We are giving these squads two hours' daily practice on that, one hour in the morning and one hour in the afternoon, in launching and lowering away and rowing. We are keeping the boats at sea as much of the time as possible and giving these men practice not merely in the harbor but out at sea under sea conditions.

Senator NELSON. How many have you at school now, in round numbers?

Mr. HOWARD. At the present time only one of these boats is ready to receive them. She has 340 on board now. We are taking them on at the rate of about 30 or 40 a day.

Senator NELSON. What is the length of the course you intend to give them?

Mr. Howard. About 30 days on these vessels, and then we intend to place them right along on board ocean-going steamers as ordinary seamen, under the scheme which Mr. Furuseth explained to you, and which was agreed upon between the Shipping Board and the steamship people, and this is going to act as a feeder right into that up to the point of saturation.

Senator NELSON. That is doubling the force of ordinary seamen and apprentices?

Mr. HOWARD. They will take out two able seamen and replace them with four ordinary seamen. Those four ordinary seamen will be men from our schools, and that will give them a very satisfactory supplementary training. Here is the agreement: The eight men on deck will carry six able seamen, two ordinary seamen and two boys—those four men would come from our schools. We are putting these men in uniform and we are making them sign an agreement for the length of time they are in such line as they choose or they may be promoted to.

Senator NELSON. Do you pay these men and give them board while at school?

Mr. HOWARD. These recruits we are paying $30 a month, just the same as the Army or Navy pay.

Senator NELSON. And they find themselves?

Mr. HOWARD. No; we board them also.

Senator NELSON. You treat them as a species of enlisted men?

Mr. HOWARD. Yes.

The CHAIRMAN. You expect to have two more ships so as to get more of these men later on?

Mr. HOWARD. We are going to get the old transport *Meade*, which is already in the hands of the Shipping Board and lying unused at Newport News, and fit her up as a receiving ship. She will handle about 100 men. Then the *Minnesota*, which is a Lake boat that was requisitioned and which is a passenger boat, and therefore capable of housing about 600 men, will be fitted up, to be held in reserve to be put in service if we find the situation demands it by the time she is ready. It will probably take two months to get her ready. In other words, what we have been starting to do in this service is to be a little ahead of the game all the time, and have the officers ready and the men ready a little ahead at the time they are actually needed, and up to date we have succeeded in doing it.

Senator NELSON. Have you had many calls so far made upon you for sailors?

Mr. HOWARD. No; because we have not been in a position to fill them, and there has not been up to the present time any shortage of sailors, and I do not look for any difficulty in getting sailors until after the lake navigation opens up; then there may be, and we must be ready to meet it in case it arises. At the same time, we are going to carry out a systematic publicity scheme to try and call back to the sea, as far as we can, sailors who have gone to inland pursuits, and that is something we are going to start on very soon.

The CHAIRMAN. Is there any restrictions, either as to officers, engineers, or sailors, as to their nativity?

Mr. HOWARD. They must all be American citizens, and while we can not discriminate between a naturalized citizen of German birth and one of any other neutral birth, yet we tell those men if they want to come into our school that it will be practically impossible for them to find a job when they get out, because the steamship companies will not employ them, and as a result there are very few, if any, of——

Senator NELSON (interposing). Of the belligerant nations?

Mr. HOWARD. Yes; birth of our enemy nation, even though naturalized. That was forced right up to us, because we found we had some of those graduates and it was practically impossible to place them. The steamship companies would not take them.

Senator JONES. That is, you mean the alien graduates?

Mr. HOWARD. I mean a naturalized citizen who was born in Germany.

Senator JONES. Do you find, Mr. Howard, any dissatisfaction among the men because of alien officers?

Mr. HOWARD. That is, the alien officers who have been admitted?

Senator JONES. Yes.

Mr. HOWARD. I have not talked with the men about it, but I have felt from the very beginning that there was absolutely no necessity of admitting the alien officers, and there is certainly no need of officers continuing to be admitted at the present time.

Senator JONES. We can get plenty of our own?

Mr. HOWARD. Absolutely; there is not a question about it. There was not a question about it. That acute shortage, that lasted about

two or three weeks, was because of letting those men in, and, in my opinion, a great mistake was made in doing this, because this is the time for getting the American-born and naturalized men into the service.

Senator JONES. While you may not have talked with any of the men, have you heard of any dissatisfaction?

Mr. HOWARD. I have heard from a great many of the officers and the officers' associations a great dissatisfaction on that account, and I have written to Secretary Redfield urging that that order be modified and that it be rescinded. It was a presidential order and made at the request, I believe, of the Department of Commerce.

Senator NELSON. It was made at the time for the purpose of getting these foreign ships in?

Mr. HOWARD. That was different.

Senator NELSON. But now that necessity does not exist.

Mr. HOWARD. We could not get any foreign ships by means of it now. That was a different order, Senator. That was the first order which made a special disposition regarding the men who were at that time officers of the foreign ships, but an additional order was passed admitting to American vessels all alien officers of neutral or friendly or allied countries, so that quite a lot of them came in.

Senator JONES. What attitude is the department taking now in response to your communication?

Mr. HOWARD. I do not know, because I have had no reply to my letter.

Senator NELSON. But you think now there is no difficulty in supplying officers from our own people?

Mr. HOWARD. Besides the men we are training I also sent out through the kindness of the Steamboat-Inspection Service a census. I got Gen. Uhler to get me through his local inspectors the names of every officer who had received a license since 1910. Then we sent a patriotic appeal to each one of those officers to find out whether in case he was not in the service at this time—that is, in case he had left sea and gone into commercial business—he would come back to the sea service in case he was wanted. Here is the result of that. [Exhibiting paper to the committee.] I am sorry this is only the summary of the whole thing; I have it in detail. But we have 644 ocean and coastwise officers who are not in active sea service who have sent us in cards stating they were willing to come if called; and we have 1,505 engineers who are on land jobs who have also signified their willingness to come if called. But we must remember that all of those men are presumably well employed where they are.

Senator NELSON. Especially the engineers.

Mr. HOWARD. Especially the engineers, and we have not felt like calling on them and disrupting business and manufacturing on shore except as a last resort. We would call on those if the necessity arose, but we have got those men all card catalogued, with their addresses, and it is a great element of safety in the whole situation.

Senator NELSON. What do you know about our supply of seamen; have we got enough of them in our ports, or can we get enough to supply our service.

Mr. HOWARD. With the same scheme I have outlined here I would say that there is not any doubt of it. We made a very careful study of that question. Here is a list of every ship that has been con-

tracted for up to October 1, with the place where she is being built, the tonnage and the number of officers and the number of crew she will require. That has been gone at in the most minute detail.

Senator NELSON. What is the aggregate amount of seamen that you need for vessels under contract or that have been requisitioned?

Mr. HOWARD. This includes boats here [referring to paper], and this is the bringing together of the whole thing. The total number of deck crew—that is, the seamen—is 13,495.

Senator NELSON. For those new vessels?

Mr. HOWARD. For those new vessels.

Senator NELSON. And the officers?

Hr. HOWARD. For the officers—deck, 4,083; and engineering, 4,078.

Senator NELSON. That would be 8,000 for the two?

Mr. HOWARD. Yes.

Senator NELSON. And 13,000 for the sailors?

Mr. HOWARD. Yes. The engineers, 23,415—that includes the engineers and the firemen, coal passers, and the oilers, and water tenders.

The steward's department is 9,154, making a grand total of 55,355.

Senator NELSON. That are needed—officers and men of all kinds?

Mr. HOWARD. Officers and men.

Senator NELSON. For the new shipping?

Mr. HOWARD. Yes. Owing to the number of vessels which have been taken over by the Navy for naval operations with naval crews, we have been making, with the aid of the Emergency Fleet and operating division, an estimate that, as near as we can tell, about 50 per cent of that number is going to be taken care of by the Navy.

Senator NELSON. For those ships they will operate as transports in the naval service?

Mr. HOWARD. Yes.

Senator NELSON. And supply ships?

Mr. HOWARD. Exactly.

Senator NELSON. That would indicate that the Navy will absorb about half of the new ships, then, would it not?

Mr. HOWARD. Under the present plan, the La Follette bill provides that you must have a certain proportion of able seamen, and you are allowed a certain proportion of new, raw recruits or ordinary seamen.

Senator NELSON. Ordinary seamen and apprentices.

Mr. HOWARD. Yes, sir. The report of the Bureau of Navigation gives an extract from Lloyds registry. I have the original right here, but I have taken this quotation out of it, showing that there are 2,500 vessels of over 100 tons in 1917 in the United States. That includes both sailing and steam.

Senator NELSON. Lake and the coastwise.

Mr. HOWARD. No; seagoing vessels.

Senator NELSON. It does not include the Great Lakes and rivers?

Mr. HOWARD. No; just seagoing.

Senator NELSON. Coastwise and ocean?

Mr. HOWARD. Yes; a few more than 2,500 ships of 100 tons or over, on the assumption they would average five seamen per ship, which as far as we have been able to find out, is a fair assumption, that would give 12,500 available. The La Follette law provides that out of each 10 of a crew on board 5 may be ordinary seamen; 1 may be

a man who has had only one year's sea experience, and the other 4——

Senator NELSON (interposing). Must be an able seaman.

Mr. HOWARD. Must be an able seaman. Now, we had to start with 12,500 able seamen in our calculation. So, if we take a quarter of that number we will find how many one-year men we can have. A quarter of 12,500 is 3,125. Then if we multiply that number by five we will get the number of ordinary seamen we can take, which will be 15,625.

Senator NELSON. As against 12,000 for able seamen?

Mr. HOWARD. Yes; making a grand total of ordinary seamen and the one-year men of 18,750, that we can take in as additional men without coming into conflict with the La Follette law, as soon as, of course, that you can get the distribution into perfect shape. Of course, it is not to be assumed that you could do that; but you can get a reasonably good distribution promptly. The estimated requirement for the new ships—with entire civilian operation, as I showed you in this account—was 13,495 sailors. If the Navy takes one-half it will mean that we will have to supply an additional number of 6,748, while the figures I read you above showed that we had the theoretical ability to take in 18,750, and it would seem as if there was a very safe margin.

Senator NELSON. In other words, there will be no difficulty in getting a supply of sailors?

Mr. HOWARD. Exactly.

Senator NELSON. Let me ask you this—of course, you need no answer it unless you want to—some think the La Follette law is an impediment to increasing our merchant marine in one way or another. If you care to express an opinion, I would like to hear your views on that.

Mr. HOWARD. I really do not feel competent to express an opinion on that, because I have never made a study of the La Follette law. I have never read through the La Follette law except the provisions which have to do with this branch of the service in which I am interested.

Senator NELSON. I have heard different opinions; some say it has worked well and efficiently, and others again claimed that it has been a hampering to our shipping, and I am like you, I have formed no opinion on the subject.

Mr. HOWARD. So far as I know, the war came on too soon after the La Follette bill became a law for us to be able to judge really what the effect would be under normal conditions.

The CHAIRMAN. Do you not think that the effect of the provisions of the law promises to be, if not already demonstrated, the attraction of our boys to the sea to some extent and making it worth their while for them to go to sea?

Mr. HOWARD. The provisions of the law certainly make a seaman's life a pleasanter one, but there have been so many—I do not think you can judge from the experience during these war times, because the whole situation is absolutely abnormal.

Senator NELSON. I think the law has proven a great attraction for foreign seamen. They get better wages, and better accommodations, and better board on our shipping than they do on much of their own; and then, of the great maritime nations Germany has been practically off the sea and England and France have devoted their energies

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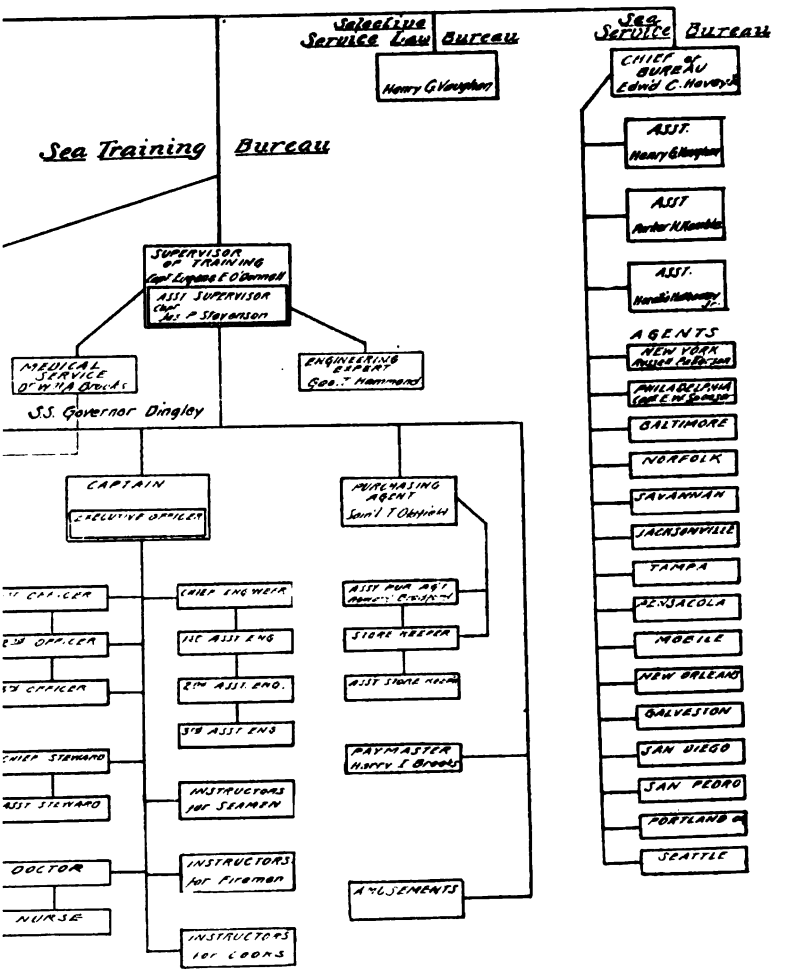
Selective Service Law Bureau
Henry G Vaughan
Sea Service Bureau
CHIEF OF BUREAU
Edwd C. Haverty
ASST.
Henry G Vaughan
ASST
Parker H Kemble
ASST.
AGENTS
NEW YORK
PHILADELPHIA
BALTIMORE
NORFOLK
SAVANNAH
JACKSONVILLE
TAMPA
PENSACOLA
MOBILE
NEW ORLEANS
GALVESTON
SAN DIEGO
SAN PEDRO
PORTLAND
SEATTLE
Sea Training Bureau
SUPERVISOR OF TRAINING
Capt. Eugene E O'Donnell
ASST SUPERVISOR
Chas P Stevenson
MEDICAL SERVICE
ENGINEERING EXPERT
Geo. T Hammond
S.S. Governor Dingley
CAPTAIN
EXECUTIVE OFFICER
PURCHASING AGENT
Saml T Ostfield
CHIEF ENGINEER
1ST ASST ENG
2ND ASST. ENG.
3RD ASST ENG
STORE KEEPER
ASST STORE KEEPER
PAYMASTER
Harry I Brooks
CHIEF STEWARD
ASST STEWARD
INSTRUCTORS for SEAMEN
DOCTOR
NURSE
INSTRUCTORS for Firemen
INSTRUCTORS for COOKS
AMUSEMENTS

largely to naval purposes. So that outside of our own country the most competition we have had has been with the neutral countries, and I think the tendency of the law has been to attract sailors here which has been a good thing for us, to furnish us with an ample supply of sailors, and I am glad to see that you think there will be no necessity to equip our shipping.

Mr. HOWARD. I think we can feel absolutely sure on that.

Senator NELSON. And you seem to be doing a great work. I have been much interested in it. You deserve a great deal of credit for the organization you have perfected, and you will certainly supply us with a good lot of officers and will in time, when you get your scheme perfected, help to get us seamen, too; and you are working gratuitously, I understand.

Mr. HOWARD. Well, I get $5 a month.

Senator NELSON. You are working for the glory of the cause. I got $11 a month when I enlisted in 1861.

The CHAIRMAN. Is there anything else, Mr. Howard?

Mr. HOWARD. It might be interesting to you to see——

Senator NELSON (interposing). Will you file that blue print with us?

Mr. HOWARD. Yes; I shall be glad to.

The CHAIRMAN. The diagram on the blue print will be inserted in the record, reduced in size in such a way as the Printing Office may find possible.

Mr. HOWARD. It might be interesting to see how we are trying to work in an efficient way under the question of providing engineer officers for the new ships. We are planning now to pick out chief engineers, and our sea-service bureau will do that and send them to the factories where the turbines are being built, to let those men work right along in those factories and see the innermost mechanism of the turbines—there are just now a great many of them—and then follow the turbine to the ship, supervise and assist in its installation on the ship, and stay there while the ship is being fitted out, and then to sea as the chief engineer of that ship.

Senator NELSON. That is a most excellent plan, it seems to me.

Mr. HOWARD. Here is a letter which I have just written to Mr. Brown, president of the Marine Engineers' Beneficial Association [reading]:

(The letter referred to was subsequently furnished by Mr. Howard and is here printed in full, as follows:)

January 17, 1918.

Mr. WILLIAM S. BROWN,
President National Marine Engineers Beneficial Association,
Hotel Belvedere, Baltimore, Md.

DEAR MR. BROWN: At my suggestion, Mr. Kemble, of our sea-service bureau, telegraphed you regarding supplying 125 chief engineers for the Emergency Fleet Corporation. These men should be competent to take charge of the engine rooms of the new ships. The idea is to have them become thoroughly familiar both with the engines and all machinery in the ships while they are being built, the man first going to the Westinghouse Machine Co., where he would assist in the construction of the turbines, and then following the completed turbine to the ship, where he would follow and assist in the installation of the turbines and other machinery, so that when the vessel is launched, he would know everything that was necessary to be known regarding the ship.

The names of the men that you get should be reported to our sea-service bureau in Boston, which will attend to placing them where they are wanted.

Another important matter which this opens up is the creation of new engineers to fill places of those who are being taken. To this end, I think it would be very desirable if you could make it known among your members that assistant engineers who have the requisite experience and other qualifications to act as chiefs should, as soon as possible, pass the examinations of the Steamboat Inspection Service, and qualify to act as chief engineers whenever they may be called or needed. In the same manner, second and third assistants should qualify, as soon as possible, for the next higher grades.

In this connection, please make it clear to all of your members that our free engineering schools are open to them for the necessary instructions, without any compensation, and where a man needs brushing up for a few days on two or three points, in order to be sure that he will pass the examinations, I will arrange with the engineering schools to give them special instruction along these special lines; in other words, we want to get the benefit of the experienced existing engineers in the higher places, and then use our graduates to fill in and take the lower positions of second and third assistant engineers. The engineers desiring special teaching in order to raise their grades should communicate at once with the United States Shipping Board Engineering School which is nearest to them. These are as follows:

Prof. Edward F. Miller, Massachusetts Institute of Technology, Cambridge, Mass.
E. O. Eastwood, University of Washington, Seattle, Wash.
Fred H. Vose, Case School of Applied Science, Cleveland, Ohio.
P. C. Huntley, Armour Institute, Chicago, Ill.
William J. Dana, Johns Hopkins University, Baltimore, Md.
C. E. Shaw, Bourse Building, Philadelphia, Pa.
James M. Roberts, Tulane University, New Orleans, La.
F. L. Pryor, Stevens Institute of Technology, Hoboken, N. J.

Yours, very truly,

HENRY HOWARD, *Director of Recruiting.*

There is just one other thing which I would like to speak about, and that is the question of the operation of the fleet by the Navy. I think every American owes a tremendous debt of gratitude to the Navy for what it has done in this war, and especially to the higher officers. I have come personally in contact with Mr. Roosevelt, Assistant Secretary of the Navy, and I think what he has done is certainly a wonderful piece of work. I have not come in contact so much with the others, but there is one fundamental thing in connection with naval operation, as it affects the present situation, and that is that the Unied States Shipping Board and the steamship association, a committee consisting of Mr. Franklin, Mr. Munson, Mr. Bull, Mr. Ward, Mr. Sherman, and Mr. Raymond, made an agreement with the three men regarding a rate of compensation to expend for a year; and the seamen have absolutely kept that agreement, and if the merchant marine should be taken over by the Navy it would be practically breaking that agreement by one branch of the Government that was made in writing and in good faith by another branch, which I think is a most serious thing to do.

Senator NELSON. Let me ask you this: Do you not think the Navy contemplates taking over what men they need in their service for supply ships, for ships furnishing the supplies and coal, what I call the auxiliary boats; those would probably be merchant vessels?

Mr. HOWARD. I think that they do; I think they would like to take over more than that; yes.

Senator NELSON. All those that do other business than for the Navy?

Mr. HOWARD. I think that Mr. Donald could tell you just what boats the Navy are planning to take over.

Mr. DONALD. We have made an agreement with the Navy that for all transports which are going over into the war zone and vessels

which have been loaded with munitions and provisions for sailors and soldiers on the other side shall be manned with reserve crews, because the Navy has been very insistent, and the Army themselves have been very insistent, that that should take place, and for the sake of having cooperation and coordination we have agreed to that. But the larger commercial vessels which are entering the war zone are ships which have been taken over by us to be used by ourselves going to France or the allies shall be manned by us, and, of course, naturally otherwise with respect of vessels going to South America or any other direction than the war zone shall have commercialized sailors.

Senator NELSON. I think it is for military reasons they insist on having naval crews on board ships going through the war zone, running into large numbers of submarines, especially vessels carrying our soldiers and munitions, the Army and Navy feel safer with naval officers and naval men aboard.

Mr. HOWARD. There may be a little additional safety by having a naval crew on board, although that is a disputed point, but it is my understanding that Admiral Benson, in his testimony given before one of these committees—I do not know whether it was this committee or not—stated that the total loss by submarines to American shipping when we enered the war had been less than 1 per cent of the vessels passing through the submarine zone.

Senator NELSON. That is, of vessels owned by us; but you must remember that we have a lot of neutral vessels that are in our service which are going through the war zone and bringing supplies for our allies.

Mr. HOWARD. We are only speaking now of the American merchant marine. Of the merchant marine, it was less than 1 per cent. It was not clear to me whether Admiral Benson meant that I per cent was the total loss from April to January or whether he meant there was 1 per cent loss on each voyage. If he meant there was 1 per cent loss on each voyage through the zone, it would mean 2 per cent on each round trip, and it would mean, if a vessel makes 8 round trips in a year, 16 per cent. I asked Secretary Roosevelt Saturday afternoon about it, and he was under the impression that Admiral Benson meant a total of 1 per cent, not the 16 per cent figure.

Senator NELSON. I am inclined to think that is it, because of our own vessels comparatively few have been sunk; they have been mostly English and Norwegian ships that have been sunk.

Mr. HOWARD. Let us see what that means. Supposing that 1 per cent had had naval operation. I asked P. A. S. Franklin if he thought there would have been 20 per cent less vessels sunk if they had had naval crews aboard. He said he thought that was altogether too high a figure; that there may have been a little additional safety, but not as much as that. Then let us take 20 per cent saving as the outside figure. If the loss had been 1 per cent, the saving would have been 20 per cent of 1 per cent, which would be one-fifth or 0.2 of 1 per cent. In other words, it is a very small matter at the most. If Admiral Benson, on the other hand, meant 16 per cent, it would be 20 per cent of 16 per cent, or about 3 per cent, which is still a small matter.

In England in the early days of the war some of the merchant-marine vessels were turned over to the army and navy for operation,

with the result that the efficiency, as compared with civilian operation, fell off over 50 per cent. There has been a similar experience in regard to vessels operated by the Army in this country. I have not the data as to vessels operated by the Navy, but I do not see any reason for assuming it would be any better than the experience was in England. So that in trying to save 0.2 of 1 per cent you are running the risk of losing 50 per cent by less efficient commercial operation. The problem that we have before us to-day is to get the greatest possible tonnage shipped across the ocean between now and next New Year's. It is not to save the utmost or to get the utmost safety in transportation. That is, you might have an additional hazard of 0.2 per cent in danger, but if you are going to get additional efficiency of 50 per cent, you should not consider 0.2 per cent or 3 per cent, whichever it might be, for a moment. What we want to do is to get the tonnage across, and people who have made a life study of ocean transportation, loading and discharging, handling of cargo, and all that, can certainly do it better than people who have made a life study of fighting.

Senator NELSON. But that loading and unloading is not done by the sailors. You overlook that. That is done by stevedores and longshoremen.

Mr. HOWARD. That is one reason the Navy want to have naval men, so that the unloading can be done by the sailors on the other side.

The CHAIRMAN. It is important for us to equip our man power over here so that we can man our merchant marine without calling on the Navy or anybody else. The Navy has a tremendous proposition to find good officers and good men for the ships it is building at this enormous rate. There is no reason why they should be loaded up with taking care of the merchant marine, which is a distinct branch.

Senator NELSON. The Navy has no trouble in their form of recruiting. They are getting the best material, but they are getting it from the interior of the country. You know that, do you not?

Mr. HOWARD. Yes; but the men they are getting are inexperienced.

Senator NELSON. But they make first-class men when they are trained?

Mr. HOWARD. Splendid.

Senator NELSON. And the Navy officers say they are much superior to the most of the men they pick up along the sea coast.

Mr. HOWARD. Our enrolling stations are taking in men we are going to train as sailors. We are always going to take those from the interior of the country.

Senator NELSON. I live in the interior country, in the upper part of the Mississippi Valley. It is surprising how our young men are anxious to enlist in the Navy. They are enlisting now because they have been cut off from volunteering in the Army, but our farmer boys are enlisting in the Marine Corps and the Navy.

Mr. HOWARD. That is the best raw material you can get.

The CHAIRMAN. We thank you, Mr. Howard, for your statement. The committee will now stand adjourned until 2 o'clock tomorrow afternoon.

(Thereupon, at 5.40 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. tomorrow, Tuesday, January 22, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

TUESDAY, JANUARY 22, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m.

Present: Senators Fletcher (chairman), Ransdell, Shields, Martin, Bankhead, Nelson, Jones, Fernald, and Calder.

The CHAIRMAN. Gentlemen, we have Mr. Main here this afternoon, and I suggest that we hear him now.

Mr. Main, state your name and place of residence, please.

STATEMENT OF MR. ARCHIBALD M. MAIN, VICE PRESIDENT MERRILL-STEVENS SHIPBUILDING CORPORATION, JACKSONVILLE, FLA.

Mr. MAIN. My name is Archibald M. Main; my residence is Jacksonville, Fla.

The CHAIRMAN. What business are you engaged in, Mr. Main?

Mr. MAIN. Shipbuilding. By profession I am a naval architect, with considerable experience as a shipbuilder. At present I am vice president of the Merrill-Stevens Shipbuilding Corporation, of Jacksonville, Fla.

The CHAIRMAN. What experience have you had in shipbuilding and as a naval architect?

Mr. MAIN. Well, I have been at it since I was a boy—practically—about 29 years. I studied theoretical naval architecture at Glasgow University, along with a number of naval students from the United States at that time. I have been here in this country 17 years. I have designed a number of ships, probably 30 or more. I worked for the Bethlehem Steel Corporation, as chief draftsman, as superintendent of one of their yards, and as naval architect. I was about five years at New London, Conn., building the two largest merchant ships that were ever built in this country, the *Minnesota* and the *Dakota*, for J. J. Hill. I was then chief draftsman and superintendent, and finally, I was naval architect of that plant. I have designed a great many vessels. Of course, I have no prepared list of the vessels I have designed; I did not come here to advertise myself at all.

The CHAIRMAN. We understand that.

Mr. MAIN. But I could supply such a list, if desired. I designed, for the Standard Oil Co. and the Mexican Oil Co., a number of tankers. One of the tankers, I understand, the Shipping Board has adopted as a standard of the type to be built. I also designed them for the Anglo-Saxon Petroleum Co.; a couple of small vessels for the

Clyde Line; and a number of lumber-carrying steamers on the Pacific Coast for Mr. Hanevy, the Dodge and Olsen people, Olsen & Mahoney, and J. E. Hooper—passenger vessels, and yachts; in fact, every type.

The CHAIRMAN. How long have you been connected with the Stevens-Merrill Co.?

Mr. MAIN. Only since the 1st of June.

The CHAIRMAN. Before that, they were an established concern in Jacksonville, Fla., were they not?

Mr. MAIN. Oh, yes; they have been there for 35 years, I think.

The CHAIRMAN. What are they doing there now?

Mr. MAIN. The Merrill-Stevens Co. now have two yards. The old yard is in Jacksonville proper, right on Bay Street, that is where they repair ships. They have a floating dock that lifts 4,500 tons; they have a marine railway; and they have three very ingenious electric hoists, the biggest of which could lift 270 tons.

In that yard they were also building a number of small ships, the biggest one being for the Gulf & Southern Co., a very complete ship, all steel. They build barges and ferryboats.

Now, they have a new yard.

The CHAIRMAN. What is the size of that ship you just spoke of, in dead-weight tons?

Mr. MAIN. About 2,000. Now, they have a new yard there on the other side of the river, about three-fourths of a mile or a mile outside of South Jacksonville, just outside of the city limits of South Jacksonville. That is a very big yard. We are building there now four of those composite ships——

Senator NELSON. What kind of ships?

Mr. MAIN. Composite steel frame ships.

Senator NELSON. Composite steel and wood ships?

Mr. MAIN. Yes, sir; the wood takes the place of the steel shell; but all the internal parts and all the parts where strength is needed are composed of steel.

Senator NELSON. The outside of the ship is wood?

Mr. MAIN. The outside is wood, and the planking is bolted onto the steel frames.

The CHAIRMAN. Will you give the committee, Mr. Main, a general idea about the layout of that yard. How many men have they; what waterways have they, and what shipways are they putting in?

Mr. MAIN. Well, I am sorry I have not a blueprint of the yard with me.

The CHAIRMAN. Just give a general description of it, please.

Mr. MAIN. I think they have 15 acres there. It is quite a deep piece of land. Then we have two basins; one of them comes in 1,000 feet from the river; it is 130 feet wide. We launch the ships sideways.

Senator NELSON. You say you have two basins there?

Mr. MAIN. Yes, sir.

Senator NELSON. And you can launch a ship on either side then?

Mr. MAIN. Yes, sir; right into this basin [indicating]. The basins come up in this way [indicating].

Senator NELSON. Are the ways so located, with regard to the river, that the big ships can come up to them?

Mr. MAIN. Well, we only launch them there; and you do not require much water for side launching, because the ship goes up into the water

in such a way that she does not draw much water; when she goes in there she only draws about 4 feet mean draft of water. There is a shipyard on the Delaware River doing the same thing; that is the Pennsylvania Shipbuilding Co.

The CHAIRMAN. Those are substantial ways there, are they?

Mr. MAIN. Yes, sir; it is a first-class yard in every respect.

The CHAIRMAN. Just give us a description of that yard, please, and what buildings you have there.

Mr. MAIN. Well, all the ways on which those boats are built on are of concrete; all the ways that the keels are built on are concrete, and all the supports are of concrete, and at the head of the basin there is an office for the foreman and washing places for the men, so that they can take a bath when they leave work, and there is a building for the pneumatic tools; and then there is the shop 360 feet long by 150 feet wide. That is where the fabricating for the ship is done, and on top of that shop, 80 feet wide, is the mold loft, where the lines of the vessel are laid down full size, and that is where you make your templets.

Senator NELSON. Do you make complete ships at that yard?

Mr. MAIN. Yes, sir.

Senator NELSON. Everything? You fit them ready for the sea?

Mr. MAIN. We do not build our own engines now; we are buying them. We will probably build the boilers, however. And then between these other buildings here [indicating] there is a carpenter and joiner shop; a separate paint shop, and a long shop here [indicating] where the coppersmiths, the pipefitters, the plumbers, the outfitters, and the riggers, and over here [indicating] in the power house are the electric generators, and the air compressors for supplying the compressed air, and the big long storeroom is about here [indicating], and over here [indicating] will be the sawmill.

Senator NELSON. I did not understand how many ways you have?

Mr. MAIN. Well, you see, when you are side launching it is difficult to say how many ways you have got. When you are end launching every way counts; but this basin is a thousand feet long, so that it could accommodate either one ship 1,000 feet long or a number of smaller ships. Just now we have three ships here [indicating] and three ships there [indicating], and over here [indicating] will be three ships about 450 feet long on the side. This new basin is being finished now. We have six ships over here [indicating] of 9,000 tons and four over here [indicating] of 6,000 tons each.

Senator NELSON. Are they for the Government?

Mr. MAIN. They are all for the Emergency Fleet Corporation.

Senator NELSON. How many do you say there?

Mr. MAIN. We have four composite ships, four 6,000-ton steel ships, and six 9,000-ton steel ships.

Senator FERNALD. You have 14 in all?

Mr. MAIN. Yes; 14 in all.

The CHAIRMAN. How is the work progressing?

Mr. MAIN. Well, we are getting on very well. I do not think there are any of the yards that are living up to their expectations, quite; but we are getting along very well. This ship [indicating] is pretty well in frame, and this one [indicating] is more than half in frame, and this one [indicating] has the keel laid and a considerable portion of the amidship up, and this one has the keel laid also.

Senator NELSON. When do you expect to have a ship ready?

Mr. MAIN. In about four months we expect to have one ready.

Senator NELSON. Not any sooner than that?

Mr. MAIN. I do not think so. You see, we have to bring our men over from Jacksonville by ferryboat to this plant.

Senator NELSON. You have to bring them over from Jacksonville?

Mr. MAIN. Yes. What we want now is to get some houses over here [indicating] for our men to live in. Some real estate men have bought land over here [indicating] and are selling lots; and we want to get the men to live there close to the plant.

Senator NELSON. How big a force do you employ there?

Mr. MAIN. Altogether about 1,500 men, counting both the old and the new yards; we have 1,000 men employed here [indicating].

The CHAIRMAN. Could you use more men if you had them?

Mr. MAIN. Yes, sir. That is what we want to do, to get accommodations for them. When the men have to travel by ferryboat, and go back home every night, you can not get the men so readily; but if the housing conditions were all right, we could work two or three shifts.

Senator NELSON. You are so fixed that, if you could have the men live there near your yard, you could work two or three shifts a day?

Mr. MAIN. Yes, sir; I do not think we would have much trouble about that. I do not think the labor troubles in the South are nearly so great as they are around the Delaware River.

The CHAIRMAN. The labor that you have there you can readily train to drive rivets, can you?

Mr. MAIN. Oh, yes, sir. We have colored men for driving rivets. They like the work; they like the pneumatic tools. You know we drive most of the rivets by compressed air.

Senator NELSON. And they operate those pneumatic tools, do they?

Mr. MAIN. Yes, they operate them; they like the noise that those tools make; they like to hear that pounding. [Laughter.]

Senator NELSON. Do you pay them by the day, or by the piece?

Mr. MAIN. By the day. They make $2.50 or $3 a day. You know, at Newport News, they use a lot of colored men; they use the colored men there for all purposes, even the machinists.

The CHAIRMAN. And you think you could get more men if you had the housing facilities for them?

Mr. MAIN. There is no doubt about it. When they have to come from across the river, and have to go some distance on land, if there is a heavy rain, for instance, they do not go at all; they do not want to get wet; they simply stay at home. But if they are living nearby, they can come in late and start work late, in bad weather.

Senator NELSON. Do those colored men belong to a union?

Mr. MAIN. I do not think they do.

Senator NELSON. They have no unionism?

Mr. MAIN. I do not think they belong to unions.

The CHAIRMAN. Are you delayed on account of not receiving materials in time?

Mr. MAIN. Not any very serious delay. Our steel did not come as quickly as we expected; but it is coming along in very good shape now.

Senator BANKHEAD. Where do you get your steel from?

Mr. MAIN. Mostly from Birmingham.

Senator BANKHEAD. That is not a very long haul?

Mr. MAIN. No, not very long. Of course, they are limited in their production; the Tennessee Coal & Iron Co. can not roll any big, heavy plates.

Senator BANKHEAD. But they are building a new plant to cost twelve or fifteen million dollars.

Mr. MAIN. Yes; they are building a new plant.

Senator BANKHEAD. And then they can make any kind of a plate.

Mr. MAIN. Yes, sir. And if they will do that, it will be a big thing for the shipyards in the South.

Senator BANKHEAD. The Steel Corporation has one of the biggest shipbuilding plants down there.

Mr. MAIN. Yes, sir.

Senator BANKHEAD. They are building it now; they have the plant at Birmingham, Ala., for producing the steel; and then they have the shipyard for the building of the ships; and the advantage of that is that they have the Warrior River to carry it down.

Mr. MAIN. Yes, they can carry it by river; I saw that.

On page 320 of part 1 of our proceedings there appear the following questions and answers; Admiral Bowles was testifying at the time.

The CHAIRMAN. Do you know of any instances where contracts have been let and the construction of the ship begun, when contractors were advised that it was determined to give a different shape to portions of the structure?

Admiral BOWLES. Yes; I know of one such case.

The CHAIRMAN. That did not apply generally?

Admiral BOWLES. Well, I know that case very well. I can tell you all about it.

The CHAIRMAN. There were no permanent changes of the design and specifications as to the steel ships made after they were originally promulgated?

Admiral BOWLES. I do not think of any. But I know this particular case; I can tell you why that was.

Senator HARDING. Let us have it.

Admiral BOWLES. This was a case of Merrill-Stevens. They were under contract to build a vessel, which was to be paid for by the dead-weight ton; and she was also to make a certain speed: but, as I remember it, there was no penalty on the speed. The specifications required that the lines should be approved by us. Now, they went ahead with their work without submitting those lines at a proper time, and when we did get them and tried the vessel in the model basin here in Washington, we found that the speed was going to be very deficient and that they had filled that ship out, in order to give more dead-weight tons in her and therefore get more money, in a way that would have nearly ruined the ship, and I, of course, gave orders to change it.

What have you to say about that?

Mr. MAIN. I heard about that. They telegraphed about that from Jacksonville, and they gave me some information to show that there was not such an intent. The first impression of that is that they were trying to do something to get money out of the Government.

Well, as a matter of fact, the price that they are getting per dead-weight ton for this ship, which is more than half steel, is not as great a price as the wooden shipbuilders are getting for the wooden ships. But that is not the point. The point is that it is stated we have made the ship so big so as to get more of these dead-weight tons, and therefore more money.

I think my best answer to that is to let the members of this committee know what was the actual intention of Mr. Payne, who had

charge of the matter at the time. I will read an excerpt from his letter.

I may say that I did not design the ship, because I was not with the company at that time. This was all done before I went with the firm. Mr. Paine says in his letter:

We had a naval architect of experience and ability to design the composite ships. This design was prepared with the object of building composite tankers for use of the oil company of which I am an officer. At that time it was most difficult to obtain steel plates: prices were soaring around $120 per ton, and our object was to use the "Jack system."

Mr. Jack is the man who was operating a yard in Chester, and he had a system of building ships, in which he took cylindrical tanks, and then built the ships around those tanks, and those tanks were to carry oil. It was supposed to be a cheaper type of ship. Payne's idea was to build cylindrical tanks in the ship for holding the oil, with outside planking for the hull in place of steel plates.

This design was about completed when war was declared against Germany, and we were advised that our own Government desired cargo ships, and that our facilities should be placed at its disposal.

In order to save time that would have elapsed by having our own architect obtain approval of the structure of the vessel and its general design by the American Bureau, I asked the chief surveyor of said bureau, Mr. N. E. McClelland, if he could not, at our expense, undertake to work out said structural designs to conform to their rule, and that we would pay him liberally, as well as such assistants as he might need to work night and day on the design, as we felt that when the structural design was completed as to weights of material, size of shapes, etc., that went into the construction of the ship were satisfactory to him, it would mean the immediate approval, officially by the American bureau. He undertook this work, and as soon as the plans were finished I asked him to accompany me to Washington in order that he might be present at the conference with Gen. Goethals when we submitted our proposal for 12 composite ships. Our object was that Gen. Goethals could then and there ask such questions of him as an official of the American bureau as might occur to him as pertinent to the consideration of the contract, and thus avoid even the few days delay that would elapse if those questions had to be asked of the American bureau's New York office by letter.

Gen. Goethals asked Mr. McClelland in my presence if the American bureau would class the ship as submitted, and he not only told him that it would, but that Lloyd's or any other established society would do so, as the design was a good one and the ship stanch and strong.

The contract was then and there closed with us, and bears date of April 29, 1917. On May 21 Mr. McClelland delivered Mr. Ferris these plans for his approval and signature. They were signed by him and were attached to our contract. No change was made in the lines of the ship or in the structure or in any other manner by us from the time the plans were submitted to Gen. Goethals until ordered by Mr. Ferris on October 8 last.

I may say that in submitting those plans to Mr. Ferris, of course there were no line plans submitted at that time. Mr. McClelland got out the line plan for Mr. Payne—for the Merrill-Stevens Co.

On that date, however, after the keel had been laid, a lot of steel had been furnaced and faired to conform to the lines of the ship and punched, we were notified by Mr. Ferris that a change in lines would have to be made.

Both Mr. McClelland, the former chief surveyor of the American bureau and ourselves protested against the change in lines upon the ground that the propelling power of the ship was sufficient to give the desired speed of 10 knots, and that if it should be under 10 knots, the change to obtain the higher speed would be so slight that it would not compensate the Government in view of the delay that would be caused by such change.

Now, I read that letter simply to show what the intent of the Merrill-Stevens Co. was in building those ships at all. It was left

to Mr. McClelland to get out the design. The Merrill-Stevens Co. had nothing to do with the design; but they employed him to do that. And this man was in consultation with Mr. Ferris; and Mr. Ferris's office indorsed the sizes, in general, that were to go into the ship, and must have been somewhat familiar with the block coefficient of the vessel; that would be the percentage of the ship that was left; if you know what the block coefficient is, and know the length of a ship, the breadth, and the draft, you can tell her displacement and judge her form. The block coefficient is the percentage of the block that is left after shaping vessel. And, knowing that, he had an idea what that ship was to be.

Now, that shows what the intent of the Merrill-Stevens Co. was.

Senator JONES. Let me see if I understand it: Were those first plans submitted to Mr. Ferris?

Mr. MAIN. No; they are just general plans; they are not the lines; not the actual lines we are talking about here. But this statement says that the Merrill-Stevens Co. did it. They did not do it themselves; they employed a man to do it, and he took it up with Mr. Ferris, and he was designing the ship for them. So that there was no purpose or intent on the part of the Merrill-Stevens Co. that that ship should be of that special form.

Senator JONES. This man who designed the ship was conferring all the time with Mr. Ferris, was he?

Mr. MAIN. Yes.

Senator JONES (continuing). With Mr. Ferris, who represented the Shipping Board?

Mr. MAIN. Yes; representing the Shipping Board.

Senator JONES. And Mr. Ferris approved his plans as far as they went?

Mr. MAIN. As far as they went; but whether he submitted the line plan to Mr. Ferris or not we did not know.

Senator JONES. You did not know that?

Mr. MAIN. No; we did not know that part.

The CHAIRMAN. Admiral Bowles also testified as follows; I asked the question:

> They were building according to some plan, were they not?

And Admiral Bowles said:

> They were building according to a general plan, but this was one of the things that they had to develop for themselves, the actual line.

Mr. MAIN. Yes.

The CHAIRMAN. Now, you went on and developed those lines?

Mr. MAIN. This architect did.

The CHAIRMAN. And the company went on to build the ship according to those lines?

Mr. MAIN. Yes; according to those lines.

The CHAIRMAN. And afterwards you submitted those lines of the architect to Mr. Ferris, did you?

Mr. MAIN. No, we did not; because we simply did what this architect told us to do; we had supposed naturally that he had that all settled with Mr. Ferris.

The CHAIRMAN. Well, what brought about this change?

Mr. MAIN The change?

The CHAIRMAN. Yes.

Mr. MAIN. I was in Mr. Ferris's office one day, and he had a set of lines; and he said: "Here are the lines of the boat; it looks a little full to us." I said: "It looks a little fuller than our model." He looked at the model, and when he saw it he said: "I do not think that boat will make the speed; you had better send me a print of your lines."

We did send him a blue print of our lines. A considerable time afterwards, about a month afterwards, he said that those lines had been tested in the model tank at Washington, and he found that the boat would require more horsepower with those lines, in order to drive her at a speed of 10 knots. And when he told us that we stopped work on the ship.

Senator JONES. How long would it ordinarily take to make a test of that kind?

Mr. MAIN. That would be difficult to say, Senator, because something might come in ahead of it; perhaps three or four days—probably more, because they would have to make a model; probably it would not take less than a week.

Senator JONES. Could it be done reasonably in a week?

Mr. MAIN. Probably it could. But if there was other work ahead of it, it would have to take its turn.

The CHAIRMAN. They were about a month in letting you know of the change?

Mr. MAIN. About that time. You know, it is not the usual thing to test a cargo ship in a tank. We do not dispute that the model test is the best criterion that has been found to test a ship; but it is not usual to have that test in a cargo ship. In fact, there are big ships on the Atlantic Ocean to-day that have never been tested in a model tank.

The CHAIRMAN. What changes were made in the ship?

Mr. MAIN. Well, the ship was made much finer.

Senator NELSON. "Much finer," you say?

Mr. MAIN. Yes, Senator, finer; she was sharpened out at both ends; and by that time, of course, we had 150 steel frames bent for the forward end of the ships.

Senator JONES. According to the old plan?

Mr. MAIN. According to the original plan. Of course, when you change the ends of the ship, you change all of it, because the middle part is square anyhow; there is not much work there; the work is at the two ends. And when you changed the ends, it meant rubbing out all of this work.

Now, I will read a telegram to explain that we approved of their change.

The CHAIRMAN. All right; you may read the telegram.

Mr. MAIN. To show the method. We never talked anything about making more money, and never referred to price at all. This was a telegram that we sent to Mr. Ferris, to be delivered to Admiral Bowles. It was signed by Mr. Payne:

We desire to present the following to Admiral Bowles through you. We were advised by Theodore Ferris about a week ago that a test has been made in tank of a model of our composite ships and that it would seem to require 1,900 horsepower to drive the ship 10 knots. He recommends changing lines. To do this will mean a delay of at least one month, probably more. Over $200,000 worth of steel has been rolled to dimensions and shipped. To now make alterations will entail serious loss. Boilers have working pressure 200 pounds, and induced draft engines will therefore

develop considerably in excess of power originally estimated for 10 knots. We believe power sufficient to drive ship 10 knots without changing lines when carrying 3,500 tons dead weight. Alteration in lines proposed by Ferris would be beneficial, but, in our opinion earlier delivery of ships is far more important than the slight reduction in speed, which we doubt. Desiring to comply with Ferris's suggestion, we stopped all work one week ago on three hulls now under way, and have been endeavoring to see how changes could be made without serious delay and loss. We beg that you wire us immediately if we may proceed with work.

Admiral Bowles replied as follows:

You are requested to comply at once with instructions received in regard to model of your composite ship. No delay need be incurred if you cooperate.

Now, there would be no further delay, of course; but then there was the delay of stopping all the work and drawing out a new line plan, running in all those lines full size in the loft floor, making new templets for the new ship, and straightening out those frames that were bent, and rebending them. That work had to be done, no matter how willing we were to cooperate.

The CHAIRMAN. What did that work involve? How did you have to get the frames out and reshape them?

Mr. MAIN. By changing the form of the ship.

The CHAIRMAN. What process did you have to go through?

Mr. MAIN. We had to make new molds, and new templets, of all those frames that were bent.

Senator NELSON. Could you not bend them over again?

Mr. MAIN. Yes, Senator; it did not spoil the material.

Senator NELSON. That is what I mean.

Mr. MAIN. We had to have them straightened and bend them again to the new shape. The delay was the only thing that we objected to.

Senator NELSON. How much did that change affect the speed of the vessel, according to the model test, and how much did it affect dead-weight tonnage of the vessel?

Mr. MAIN. Well, there has been no change in the dead-weight tonnage, strange to say, because they found out that she could load to a deeper draft. They found out, when they figured up the freeboard by the American Bureau of Shipping, that she could load deeper, and there is no change in the dead-weight at all. So we would not lose anything at all; we were not talking about that, but about the delay.

Senator NELSON. You have the same dead-weight capacity in the ship?

Mr. MAIN. The same dead-weight capacity that we always had. It was the delay that we minded.

Senator NELSON. And there is a probability of increased speed?

Mr. MAIN. Yes; now we will have a speed higher than their plan called for.

I was talking about delay. Now, there was something said in what the chairman read about ruining the ship. Even if a ship made half a knot less speed, I would not call her ruined on that account. And we do not know yet about that ship; she might have made the speed even as she was, although the tank test showed otherwise, because very often they make half a knot more than they are designed to make.

Senator JONES. Well, did the model test show just half a knot less speed?

Mr. MAIN. It just gave the required power; it did not show the loss of speed that it had fallen down.

Senator NELSON. Could not that rate of speed be made greater by getting a little more power per engine?

Mr. MAIN. They were already under way; the engines were already being made; there was no other way to get speed except by fining the lines.

The CHAIRMAN. Would you say, as to the statement that you had filled the ship out in order to give more dead-weight tons, that that was not your purpose?

Mr. MAIN. That was not our purpose, because we did not do it; it was another man who did it, and he did it not only for us because the same lines were used for the Terry Shipyard at Savannah, Ga.; and, in fact, for all the composite ships being built.

The same man was working for them, and in fact he is with them now.

The CHAIRMAN. And you were to go ahead on that plan until they submitted these changes?

Mr. MAIN. We were going ahead.

The CHAIRMAN. You were going ahead, and Mr. Ferris knew that you were going ahead?

Mr. MAIN. Yes; Mr. Ferris knew it, but I guess he did not think anything about the new lines of the ship.

The CHAIRMAN. When you sent the blue print of your lines then, you say it took them nearly a month to test it?

Mr. MAIN. Yes; to determine; we have the date to prove that. But of course that always takes time.

The CHAIRMAN. And then you say that after being notified of the change it delayed your work for over a month?

Mr. MAIN. Yes; we had to stop work on both ends of the ship, and rub all that out, as well as make new templates.

The CHAIRMAN. Well, as a matter of fact, the dead-weight tonnage of the ship as it is now is about equal to what it was under the original plan?

Mr. MAIN. Yes; because she sinks a little deeper in the water; she is allowed to sink to a little deeper draft.

The CHAIRMAN. Have you anything else to submit?

Mr. MAIN. Well, I wanted to say that that was not the intent of the Merrill-Stevens Shipbuilding Corporation; there was no intent to get any more money out of the Government. There was some other point in that extract that you read, Mr. Chairman, about the ship being ruined.

The CHAIRMAN. Admiral Bowles said that you had filled that ship out, "In a way that would have nearly ruined the ship."

Mr. MAIN. Now, you can ask any shipbuilders whether going half a knot slower would ruin a cargo ship. If you contracted to make 20 or 30 knots on a passenger route, it might ruin her; but I do not see how it would on a cargo ship. And then I still think the ship would have made the speed. The claim was made that she had radical lines; but I have seen ships of about the same shape that have done very well.

Then there was something else in that statement that you read, Mr. Chairman. It was to the effect that it was our intent to do something which was not right—which was not our intent at all, as these

letters (indicating) will show. We did not design the ship; and the same design was being used by other people. The Kelly-Atkinson Co., I think, is one of the builders of composite ships, and they use that design.

The CHAIRMAN. The statement says that, "they went ahead with their work without submitting those lines at a proper time."

Mr. MAIN. We were not called upon to submit those lines. They said there was a letter written to our company asking for the lines, but we never saw such a letter. Of course, we never would have thought of submitting the lines, because this other man was doing that work, and he was in consultation with Mr. Ferris.

The CHAIRMAN. And he was a surveyor for the American Bureau of Shipping?

Mr. MAIN. He was; but he has since left them.

There was another point I wanted to make about our good faith in cooperating with Admiral Bowles, and about the delay. They said there would be no delay. There had to be delay when we made those changes. They cause the delay.

I will read another letter which I have here, written on October 26 by the Merrill-Stevens Co. to Admiral Bowles. I will read from that letter:

In your telegram of the 19th instant regarding the above you stated as follows:

"You are requested to comply at once with instructions received in regard to model of your composite ship. No delay need be incurred if you cooperate."

There can be no question of our good faith in cooperating with Mr. Ferris in effort to avoid delay caused by the changes in the lines of these ships requested by him, but all the good faith in the world can not alter the fact, however, that there is bound to be delay in carrying out the change as stated in our telegrams to you.

And the letter goes on to say:

The attendant delay will cause a considerable expense, which we feel should not be borne by us, and in due course we will make up a statement of same for your consideration.

The CHAIRMAN. You did cooperate with the Fleet Corporation in making that change, did you?

Mr. MAIN. Yes, sir; we did cooperate. Admiral Bowles wrote us on November 7, and I will read the last paragraph of his letter. He said:

In making the necessary changes you have cooperated with us and in return we have cooperated with you.

Now, I think there is a statement that you read, Mr. Chairman, from Admiral Bowles's testimony, saying that they never heard any more from us.

The CHAIRMAN. Yes.

Mr. MAIN. And the inference was that we had simply neglected to consult the Shipping Board, and had gone ahead with the change and paid no attention to them.

The CHAIRMAN. No, I do not think he meant that. He says:

And I told them that there would be no delay if they got busy and accepted my decision, which was certainly absolutely right, and I have not heard from them since. They made the changes.

Mr. MAIN. He says they have not heard from us since. Well, he wrote us November 7 and said: "In making the necessary changes

you have cooperated with us and in return we have cooperated with you." He wrote us a very nice letter. He then said:

In making the necessary changes you have cooperated with us and in return we have cooperated with you, and we feel that you should realize had the vessel been continued with as originally contemplated and possibly rejected when completed because of nonfulfillment of the contract as to performance it would have been a serious matter. We think you should also realize that if you had submitted the lines for approval in August, in compliance with the general requirements of the specifications, and at a time when it appears the lines were developed, the matter would have been dealt with, thus avoiding what you feel now constitutes some delay. For the very purpose of avoiding what you now bring up, some long time ago a letter was written your company calling attention that it would be necessary to submit the lines and design of the ship for our consideration and approval.

We can not find any record of that letter.

Senator JONES. What does he say about the lines that the specifications call for?

Mr. MAIN. The lines are not mentioned in the specifications. Of course the general plans are mentioned in the specifications, which would include lines.

Senator JONES. That is what I mean.

Mr. MAIN. But in the beginning this naval architect was in consultation with Mr. Ferris.

Senator JONES. But he was your architect, was he not?

Mr. MAIN. He was employed by us.

Senator JONES. Well, did you suppose all the time that he had submitted the lines to them?

Mr. MAIN. We understood that it was quite understood with Mr. Ferris what those lines were; because they worked together, selected suitable engine, and McLelland supplied figures which gave us the lines; in fact, that is where we saw the lines that he had submitted later to Mr. Ferris; because he was doing this work for other firms as well as for us; he was doing it, as already stated, for the Terry Shipbuilding people as well.

Admiral Bowles also said in that letter:

However, please understand it is our wish and desire to deal justly and fairly in all matters and do everything possible to expedite the construction of the vessels.

And that was practically how it closed.

And we wrote him again on the 10th, in answer to that, as follows:

We received your letter of the 7th instant regarding the change in lines of the above ship, covering correspondence between us on same, and I do not know that there is anything further that we can say on this subject except that we are doing everything possible to hasten the work and have cooperated unstintedly in an effort to lessen the delay which has been necessary in making these changes.

We are gratified to have your assurance that it is your wish and desire to deal justly and fairly with us, and we can assure you that we have never had the slightest doubt upon the point on the part of either Mr. Ferris or yourself.

That letter was signed by Mr. W. J. Payne, then vice president of the Merrill-Stevens Co.

So we finished the thing up in that way. But the Merrill-Stevens Co. wanted me to show that they had no intention of trying to get anything that was not just out of the Government; they had no intention of doing anything that was not right.

The CHAIRMAN. They had no intention of increasing the deadweight tonnage in order to get more money?

Mr. MAIN. No; that was not their intention at all. Because if we had done the thing ourselves it would have been different; but, as I

say, we had an outside man do it; so that nothing of that kind could come up; and exactly the same thing was being done by the other builders of composite ships. So that there was no reason why the Merrill-Stevens Co. should do that for other people as well as for themselves.

Senator JONES. Were those other people building ships for the Government?

Mr. MAIN. They were building ships for the Government, yes; but we were worse hit because our ships were further on at the ends than theirs. But, as I say, everything is going along now with full speed, and Admiral Bowles has assisted us in several ways; so that we in turn can be of more service to the Emergency Fleet Corporation. All that we need now is housing facilities near the yard; and when we have a town grown up around us we will have one of the best and most permanent yards in the country—a first-class yard at Jacksonville, with facilities to repair ships as well. We have a floating dock now, and so forth.

Senator JONES. Have you tried to get additional men and been met with the objection that you did not have a place for them to live?

Mr. MAIN. That was our trouble, in not having a place for them to live near the yard.

Senator JONES. I asked you if you had tried to get help and been met with the objection that there was not any place for them to live?

Mr. MAIN. Oh, yes, we have; we have had the men for some time complaining about having to pay very high rents, and having to go so far away, to the outskirts of Jacksonville.

Senator JONES. Have any men that you tried to get refused to go and work for you on that account?

Mr. MAIN. Oh, yes, men have told me that; that is the first thing they ask: "What are your living conditions? Can we live near the yard?"

Senator NELSON. What proportion of the force employed in the yard are colored men?

Mr. MAIN. About 50 per cent.

Senator NELSON. About half of your working force?

Mr. MAIN. Yes, fully half of them; and the big lot of ordinary laboring men there are all colored.

Senator JONES. Has your company taken any active steps toward securing housing facilities for those men?

Mr. MAIN. Well, we are. We have had one or two architects get up sketches of houses, and we have had booklets from different people who build those knock-down houses. And we once mentioned the fact that we would like to have some appropriation to help us along that line; but there was nothing doing just then.

Senator JONES. Well, you have not been trying to do anything in a final way to get houses for your men, have you?

Mr. MAIN. In Jacksonville?

Senator JONES. I mean to furnish you with the housing facilities that you need for your men.

Mr. MAIN. Through the board?

Senator JONES. No, I did not mean through the board. I mean through yourselves.

Mr. MAIN. Yes; we have.

Senator JONES. Well, what have you done?

Mr. MAIN. Well, I got prices on a house, and it was $2,250. I got that price from a builder, but that was too high for the type of house we wanted, and we are trying to get prices on a cheaper house, that would cost about $1,000.

Senator JONES. Do you contemplate investing in them?

Mr. MAIN. We do.

Senator JONES. Without waiting on the Government?

Mr. MAIN. Without waiting on the board. We have the matter up now, and I am to take the matter up when I get back to New York, on a proposition for some land near our yard that will be available; we have not enough land of our own available just now.

Senator NELSON. And you have, on your own account, without waiting for the Government, taken up the question of providing facilities for your people?

Mr. MAIN. Yes; and we have done everything that we could to encourage the men to buy houses, and tried to help them out in that way.

Senator CALDER. Mr. Main, your shipyard is in Jacksonville, is it? I was not present when you began.

Mr. MAIN. Yes, in Jacksonville.

Senator CALDER. How near the city is it?

Mr. MAIN. The new shipyard is across the river. Do you know South Jacksonville?

Senator CALDER. I know the city in a general way.

Mr. MAIN. It is just outside of South Jacksonville.

Senator CALDWELL. How many men do you employ?

Mr. MAIN. In the new yard there are nearly 1,000 men now, because there is some building going on. They are not all working on ships.

Senator CALDER. How many men could you employ in your yard?

Mr. MAIN. About 3,000, or more, if we could get them.

Senator CALDER. Would you have any trouble in getting the labor?

Mr. MAIN. I do not think we would have; we may have trouble in getting skilled men such as loftsmen; we have trouble now in getting loftsmen to make the templets—and in getting draftsmen.

Senator CALDER. Senator Jones was asking you concerning your housing facilities?

Mr. MAIN. Yes.

Senator CALDER. Are there not sufficient housing facilities in Jacksonville to accommodate your men?

Mr. MAIN. That might be true; but Jacksonville has had until quite recently a large cantonment; that brought quite a lot of men around there; they filled up the boarding houses and other places.

Senator CALDER. Are you considering building homes for the workmen near your plant?

Mr. MAIN. Yes; we think that is necessary, because they will stay with us better then; you know in a shipyard, and I suppose in other concerns, you have to employ 50 or 75 per cent more men than you keep; they are coming and going all the time.

Senator CALDER. Will not such an investment be attractive enough to induce outside concerns to go there and build?

Mr. MAIN. I believe it should. One concern has been buying land and selling lots on it to other people; and five or six houses have been built in that way.

Senator CALDER. Do you believe it is possible for you to get housing accommodations near your plant for your workmen without help from the Government?

Mr. MAIN. I hardly think so; but it may be possible; but I do not think we will get enough that way; we will require to have some help.

Senator CALDER. It seems to me that the builders in that section might find that an attractive business to engage in—building homes and renting them and selling them to the workmen on your yard.

Mr. MAIN. I do not think the real estate dealers will do anything; just individuals have built houses so far.

Senator CALDER. That is all I have to ask.

Senator JONES. I suppose you are likely to relax your efforts to provide housing for your men now that the Government contemplates going into the supplying of houses for the workers in shipyards?

Mr. MAIN. I do not think we will, because we are getting more data for it every day.

Senator JONES. It is not a question of getting data; it is a question of getting houses built.

Mr. MAIN. Well, it costs a good bit of money to get houses built. By "data," I mean finding out the cheapest and best kinds of houses. We have been considering those knock-down houses, that can be erected so easily; we have had prices on the "Aladdin" houses, among others. Of course, there are so many men in a shipyard that you must have more than one type of house for them.

Senator NELSON. You can use those knockdown houses to much better advantage in the South than they can in the North.

Mr. MAIN. Yes; we do not require cellars or furnaces, and, of course, for the colored men in the woods we could build very cheap houses.

Senator NELSON. I want to ask you this: How much per ton compensation does the Government give for building that composite ship?

Mr. MAIN. Do you mean the average prices from the Shipping Board?

Senator NELSON. Yes.

Mr. MAIN. $136 per dead-weight ton.

Senator NELSON. $136 per dead-weight ton for the composite ships?

Mr. MAIN. For the composite ships.

Senator NELSON. Complete?

Mr. MAIN. Complete.

Senator NELSON. In every respect—"insides" and all?

Mr. MAIN. Yes.

Senator CALDER. Including machinery?

Mr. MAIN. Including machinery, rigging, sails, flags, pots and pans, and tile bathroom.

Senator NELSON. $135 a ton.

Mr. MAIN. $136.

Senator NELSON. And how much for the other ships?

Mr. MAIN. The steel ones?

Senator NELSON. Yes.

Mr. MAIN. I think one of them is $161 and the other $170, if I remember right.

Senator NELSON. Are there only two of them?

Mr. MAIN. No; there are four of the 6,000-ton vessels and six of the 9,000-ton size.

Senator NELSON. Is there a higher price for the 9,000-ton ship per ton?

Mr. MAIN. Yes; there is a higher price for that.

Senator NELSON. How much is it a ton for that?

Mr. MAIN. $170, I think; I am not positive of the figure.

Senator NELSON. And how much for the others?

Mr. MAIN. $161, I think the others are; they were taken earlier, and of course labor was lower when they were taken.

Senator NELSON. And that is the entire compensation?

Mr. MAIN. That is for everything; complete.

Senator NELSON. What is the style of your contract?

Mr. MAIN. I think it is what they call a "lump-sum" contract.

Senator NELSON. Lump sum; so much for the vessel complete?

Mr. MAIN. So much for the vessel complete, delivered after a trial trip.

Senator NELSON. Yes. I think that is all.

The CHAIRMAN. That is all, Mr. Main; we are much obliged to you.

Mr. MAIN. Thank you for hearing me, Mr. Chairman.

STATEMENT OF HON. WILLIAM DENMAN, SAN FRANCISCO, CAL.

The CHAIRMAN. Mr. Denman, you were formerly chairman of the United States Shipping Board and president of the Emergency Fleet Corporation, were you not?

Mr. DENMAN. Yes, Senator.

The CHAIRMAN. What time, Mr. Denman, did you begin your service with the Shipping Board?

Mr. DENMAN. I had participated in drafting the law in 1915 and 1916. Our appointments were made on December 22, 1916. The members of the board awaited confirmation, and finally assembled here the first week in January. They began the program of organization of the board's work; prepared that plan and had it in shape for Congress at the time the confirmation of the board was made some time in the last week of January. The board was organized on January 30.

The CHAIRMAN. 1917?

Mr. DENMAN. 1917; last year. And the majority group of the board, which retired on July 24, were then assembled in Washington with the other member—Mr. Donald, from New York. Subsequently thereto, Mr. Stevens—my recollection is that it was early in March—became a member of the board; and from that time the board remained as thus constituted until the 24th of July.

The CHAIRMAN. So that you began, then, as chairman of the board, actively, about the 30th of January, 1917?

Mr. DENMAN. Yes.

The CHAIRMAN. And continued until July 24, 1917?

Mr. DENMAN. That is correct. We did not receive the Congressional war powers we asked for—that is, to buy or commandeer or control shipping—till July 11.

The CHAIRMAN. Then when did you form the Emergency Fleet Corporation?

Mr. DENMAN. The Emergency Fleet Corporation was formed some time after April 15; a very short time thereafter—at the time that we employed Gen. Goethals. And I believe you have had before you in the committee a copy of the articles of incorporation and a copy of the by-laws of that corporation.

The CHAIRMAN. Yes, we have all of that. Now, the Shipping Board was composed of whom while you were chairman, Mr. Denman?

Mr. DENMAN. The vice-chairman was Mr. Brent. The other members were Mr. Donald, Mr. White and Mr. Stevens; and that continued to be the membership of the board until, as I say, the 24th of July.

The CHAIRMAN. Mr. Donald and Mr. Stevens continued on the board after July?

Mr. DENMAN. Yes; and are still on the board.

The CHAIRMAN. What was the attitude of the board, both before and after the war, before the increase of the steel tonnage of the United States, to meet the emergency due to the shortage of ships?

Mr. DENMAN. During the period beginning in January, 1917, the German submarines were beginning to show greater destructiveness and in February they began their unlimited sinkings. We very soon naturally caught the pulse of those losses; and although we were not in the war, and although every effort was being made, I believe, not to precipitate the conflict, we became impressed with the need of expanding the commercial tonnage of the United States.

We had previously, on the 30th of January, the day of our organization, passed a resolution asking the President to put an embargo on the transfers of vessels from the American flag; and that proclamation was issued on February 5. The effect of that was to stop a very rapid flow of tonnage out from under the flag; and hold in, particularly, those small power boats that afterwards, and now, form the bulk of our coast patrol defense. The price offered for these vessels by the allied governments was often twice their cost.

The board was given the power under the provisions of the act, on petition, to let those small vessels, and all vessels, out from under the flag, within our discretion. We declined to let any of the vessels go, save two or three specialized types, such as an ice-breaker for Archangel, and some sugar boats for Cuba; and we held in that mass of tonnage under the flag.

We let none of those small steamers go, those power boats and fishing boats, although great pressure was brought to bear on the board and on various officials to persuade us to allow them to be transferred.

We made an investigation of the possibility of obtaining a steel tonnage from our various steel shipbuilding yards. That was quite extensive. We found none of them willing to build for the board, and all of them complaining that their facilities were either completely utilized by the Navy or by their merchant contracts; all said they would be unable to take any large contracts from us.

They complained greatly of their inability to obtain labor; were rather pessimistic about expansion of labor supply; and on the whole, we had the impression at that time—that was in the month of February and in the month of March—that we could not look for a

very large extension of steel construction immediately; certainly not without the granting of war powers to the board, or to somebody that could coordinate all of the shipbuilding facilities.

Now, to meet that situation, we turned to investigate the possibilities of wooden ships. A great deal has been said about the attitude of the board on the question of wooden tonnage, our friends of the press—if I may use a phrase of the West—"overplaying our hand" on the question of building wooden ships. An impression grew throughout the United States that the Shipping Board had nothing in mind but the creation of a wood tonnage increasing the fleets of the United States.

But that was entirely and completely erroneous and I think it has done more harm—this unfortunate occurrence—to shipbuilding expansion than any other single thing that has occurred.

In my first announcement of the wooden ship policy in New York on April 4, 1917, I went very carefully into the distinction between the availability of the wooden ship and that of the steel ship. I pointed out that we did not believe wooden ships were as good as steel ships, due to greater depreciation, the cost of upkeeping, and all of those things that we who are familiar with the sea are acquainted with—and we are very much more familiar with the two classes of vessels on the Pacific coast than they are elsewhere in the country.

The relevant portions of that statement are the following:

About seven weeks ago we began to organize for the purpose of supplementing the trans-Atlantic tonnage with ships from a source that would not disturb the major steel program of construction which the chairman has referred to.

Those of us who come from the Pacific coast are familiar with the wooden ship; it has dropped out of commercial life until very recently, on the Atlantic, and for the very good reason that wood can not compete with steel under any plan of construction we now have of wood, even though the vessels have an equal commercial value at the time of construction. The upkeep and other costs in the operation of wooden vessels have put them out of the running with steel construction, under normal conditions of the price of steel. In this emergency, however, the only place we could turn to for additional tonnage was to the forest and to the unorganized forces of the woodworking labor and the smaller machine shops and the smaller boiler factories not serving the steel yards. The idea of a great wooden fleet has long been with us on the Pacific coast, because our great timber owners there have been looking for some means to get the enormous resources of those forests at work in the world. But we had one fear—that was about the engines; and we have spent the greater portion of the time since we began last February in working out the details of some scheme to stimulate the construction of engines for vessels of the type that we could build out of wood.

And subsequently, in various communications to Congress and to the public, we expressed our firm conviction that the wooden ship was not comparable with the steel ship, and repeatedly said that it was a mere supplement to the steel tonnage.

But, as you know, throughout the entire course of administration of the board, the public had the point of view that we were trying to build nothing but wooden ships and were depreciating the value of the steel ships in attempting to expand the building of wooden ships.

The CHAIRMAN. Was that not due, Mr. Denman, pretty largely to a studied and persistent propaganda in favor of steel ships?

Mr. DENMAN. Well, in part it was that, Mr. Chairman. There was this situation: It was apparent that there was going to be a Government investment in ships. Early in the year 1917 few thought of the large amounts that we were going to spend for shipbuilding. We knew, however, that we would have to spend tremen-

dous sums, and that we would have to do just as we have done in the way of forcibly interfering here and there to compel the coordination of that industry. But the steel men, or many of them—all the steel-construction men—felt that there would be a limited appropriation; that everything that went for wood would not go for steel. And naturally there was that kind of opposition. Men then did not realize the emergency. And there was a pretty definite propaganda, as far as we could receive an impression of it, to minimize the value of the wooden ship as an emergency supplement to the diminishing existing tonnage.

The CHAIRMAN. My own impression was that it was very pronounced then, and continues so up to this time.

Mr. DENMAN. I think that is true. I think there are some manufacturers who believe that there is only so much money to be appropriated, and that whatever goes for wooden ships will not go for steel. I think it is a very shortsighted policy; and I think most of those men could be reasoned out of it if they could be made to see the emergency. That movement took various forms of expression that it is unnecessary to go into here.

The CHAIRMAN. Well, your attitude, then, toward the wooden tonnage was that you favored it because you wanted ships, and that was, in your judgment, one of the quickest ways of getting it?

Mr. DENMAN. I think our attitude was best expressed in a communication that we prepared addressed to this committee, in which we dealt with the problems that you have been discussing here for the past few days. This is a communication addressed to the Committee on Commerce of the Senate on May 5, 1917. You will notice that this was before the date of the alleged disagreements of various members of the Shipping Board and the Fleet Corporation as to the building of wooden ships. In this letter we said:

On February 23, 1917, that is to say, about three weeks after we were organized, and seven weeks before the declaration of war, the board recognized that a great danger to the food and munitions transportation to the allied powers had arisen in the increasing efficiency of the German submarine. It made an inquiry among the steel shipbuilding yards concerning the available yard space for additional steel tonnage, and was advised by the yards that there was practically no possibility for constructing for Government account anything but an inconsiderable additional tonnage.

Apparently the only available resource of the country for the further construction of tonnage was wood, and as many wooden ships driven by steam power and constructed from unseasoned timber were in successful use on the Pacific coast, it concluded to engage in an enterprise of stimulating the construction of wooden cargo carriers as a supplement to the output of the steel yards.

I may say that we used a similar phrase in the announcement on the 2d of April that this was merely a supplement of the output of the steel yards.

It recognized that wood was a material inferior to steel for merchant vessels, but felt that the emergency required the construction of every available ton of shipping for immediate carriage on the North Atlantic, regardless of the commercial character of the investment.

The board's investigations were conducted chiefly under the management of Mr. F. A. Eustis, who first brought us assurance of the certainty of the supply of engines and impressed on us by his vigorous arguments the feasibility and necessity of such a plan, and by Mr. F. Huntington Clarke, who later joined the forces of the board. Both these gentlemen, it may be said, have refused compensation beyond the $1 a year salary necessitated by the provisions of our statutes.

After a thorough canvass of the entire group of wooden-ship builders on all the coasts of the United States and a careful estimate of the engine-producing facilities, the board embodied its proposal in proper form and presented it to the President, who in

turn referred it to the Council of National Defense. After deliberation by that body, it received its enthusiastic indorsement, and subsequently the approval of the President.

The plan proposed a standardization of the construction, in so far as it was practicable of application to the varying conditions in different shipyards already existing and to be created on all our coasts, and the combination of skilled shipbuilding labor with the better class carpenters in general building construction, especially those engaged in bridge timber, mine support, and similar woodworking crafts. The experience in Pacific yards showed that one skilled shipwright using the sawed parts of the Pacific coast timber would make available from 7 to 10 of these mechanics from the other crafts. Since that time a very large number of old and newly organized yards have prepared themselves with material and facilities for engaging in contracts with the Government and are now awaiting an appropriation adequate to carry out the enterprise.

At about the time we made our inquiries as to further production of steel ships and subsequent thereto, over a million tons of steel construction contracts had been let.

And that goes into another matter that you may be interested in later.

The anticipations of the board as to the effectiveness of the submarine have proved all too dangerously true. The rate of destructivity of the submarine has mounted steadily even beyond our calculations.

This was written on May 5, you will remember. I will say that this statement was never given to the public; it was merely put before this committee.

A careful study of all the available sources of information which have come to your board, and which we think exhausts all that is to be known in the United States, clearly indicates that the Germans are destroying shipping in the North Atlantic and Mediterranean at the rate of not less than 13,000,000 dead-weight tons per annum.

This was the estimate of the month of April, 1916. The April rate was not maintained, but the total losses for the remainder of the year 1917 are safely approximated at between eight and nine millions, if we include vessels injured and not sunk and loss from other causes.

Senator BANKHEAD. You mean April, 1917, do you not?

Mr. DENMAN. Yes; April, 1917.

Senator NELSON. Did you say 15,000,000 tons per annum?

Mr. DENMAN. Thirteen million dead-weight tons per annum. I suppose some of the witnesses have brought out here the distinction between dead-weight and gross tonnage. The American merchant has always bought on dead-weight tonnage; the English statistics have always been kept on gross tonnage; and so we have had a continual confusion in the public mind, and in Congress, as to the difference between those two units of measure.

Senator NELSON. What figure do you use in rendering gross tons into dead-weight tons—1.60?

Mr. DENMAN. It is variable, you see, Senator Nelson. You take ships of certain shapes and builds and the relationship will be of one character and in other shapes and builds it will be of another character. We have figured in computing a mass of tonnage between 1.50 to 1.60 to 1, or 150 per cent to 160 per cent over the gross, to get the dead-weight.

Senator NELSON. Yes; that is, a 6,000-ton ship, gross tons, you would figure at 9,000 tons dead-weight?

Mr. DENMAN. Between 9,000 and 10,000, depending upon the character of the construction. It may be less than 9.

I will now read again from this statement:

The reproductive capacity of the steel yards of all the world under their present rate of reproduction, plus all the wooden ships that can be built inside of a year, will give us not over 4,500,000 tons of new vessels.

That was on May 5. Even that prediction was optimistic. There has not been that construction, and probably will not be, between May 5 of last year and May 5 of this year, although it will not be astonishingly below that.

At the beginning of this year the allies had at their disposal for their North Atlantic and Mediterranean service, including charter of neutral vessels and the American ships in that trade, a supply of vessels several hundred short of the number required to maintain a proper transportation for their necessary food and war material and munitions. Unless the central powers be conquered on land, it is apparent from the above facts that Germany may be victorious within the year, provided the above ratio of destruction over reproduction is not changed.

Let us see what was happening then. A million—or 1,100,000 tons, dead-weight, according to the figures we have—in April, and figure on that for a year, and then remember that they were 300 vessels short at the beginning of 1917, and you have your picture of what the year's results would be.

Now, we are coming to our attitude on steel tonnage:

The only source left to the Shipping Board is the stimulation of production of steel tonnage, and the only method by which this can be brought about is by drastic concentration upon shipbuilding of all the steel producing and constructing agencies within the Nation. The first step necessary is the abolition of the slow time commercial ship contracts, and the rushed completion of the vessels now started by double-shift employment of the yard labor.

It is apparent that if the Government is to furnish labor and material taken from other American industries and disrupt other American contracts and enterprises, it should own the ships so constructed. The next step is the creation of new ways in old yards and new shipbuilding yards to which shall be diverted the steel, labor, and facilities now engaged in the construction of steel and frame buildings and bridges and similar structures. A reasonably careful investigation among the steel manufacturers has proved the feasibility of the scheme proposed by the Secretary of Commerce several years ago for fabrication of the greater portion of the material entering into steel vessels at the many great fabricating plants of the country, and their assembling into the structure of the vessel at the seaboard or on the Great Lakes. A great bridge-building corporation, which has successfully met the competition of the entire world in a number of its enterprises, has seriously proposed to us to build 100 ships of over thirty-five hundred tons dead-weight carrying capacity, the first to be delivered within six months and one ship a day thereafter. They plan the utilization of Secretary Redfield's scheme of standardized fabricating and assembling the parts thereafter at the shipyard.

Now, out of that grew the legislation which has made that scheme possible. Congress in, I think, an expeditious manner, gave us on June 15 the legislation which we there requested. Under that we were in a position to commandeer plants or power or materials necessary for the building of the ships, and under it has grown and developed the scheme that we now have for coordinating all the shipbuilding facilities of the country.

The CHAIRMAN. What was then done, Mr. Denman, to prevent vessels from leaving the flag?

Mr. DENMAN. The first thing was the proclamation of the President, which gave the board the power to refuse the right to sell the vessel from under the American flag.

The CHAIRMAN. And the board acted on that and pursued that course?

Mr. DENMAN. Yes.

The CHAIRMAN. Except in the instances you have mentioned. What was done by the board regarding the adjusting of sailors' wages during the war?

Mr. DENMAN. Prior to the declaration of war Mr. P. A. S. Franklin's steamship lines had come to accept the services of the sailors' union on that great fleet operating under the ownership of the International Mercantile Marine. The wage which they had arrived at, I think, in the month of February, if not in March, was $60 a month for sailors, and varying amounts for the other members of the crew, with a bonus of 50 per cent for those engaged in work in the war zone.

Senator NELSON. That is the rate now?

Mr. DENMAN. Yes, I think it is, due to circumstances which I shall now relate, Senator.

Mr. Furuseth came to me—I had known him for many years on the coast—and asked me if there could not be an agreement whereby all the ships could be brought into an intimate contact with union labor, so that they could go to those sailors that had left the sea during the conflicts between labor and capital in the ship operating business, and ask them to come back to the sea, and say that pending the continuance of the war they need not fear the treatment they had received prior to the war in the nonunion ships. I am not entering into the merits of that controversy; I simply state it as Mr. Furuseth stated it to me.

There were many negotiations following that first meeting. Mr. Franklin had found it successful in his vessels, and gradually, one by one, other shipowners were persuaded to join in an agreement at the March rate of wage, which should last for a year after the signing of the agreement. I think all of the Atlantic shipowners, with possibly some small exceptions, came into the group, and the agreement was finally worked out about the 9th of June. It was not signed until some time in August, but from the time of the first negotiations in May until now there has not been a sign of an attempt on the part of the sailors to break away from that agreement, and so far as I know there has been good faith on the part of the shipowners.

But I may say as to the result of that, that the shipping people are practically the only class, during all the changes and turmoil that came out of the war and the rise in the living conditions, that have had no wage troubles arising from disputes between employers and employees. And I think it is due largely, if not entirely, to the ability of these men to get together and have a plain understanding between one another, and to eliminate, for the time being at least, the antagonisms which had arisen out of the long controversy.

Senator NELSON. When you speak of $60 a month for seamen. Do you mean ordinary seamen?

Mr. DENMAN. Mr. Furuseth has put the schedule in the hearings, and I did not attempt to charge my memory with it.

The CHAIRMAN. What was done with regard to securing a supply of sailors for the ships?

Mr. DENMAN. Part of this agreement was that the unions were to go out and bring in the men that had become dissatisfied. There were a great many sailors on the Pacific coast, and, I understand,

on this coast, that had left the sea, due to the low wages of their trade and the greater inducements on shore. On the west coast many of the Scandinavian sailors had gone into the forests; they had been lumbermen in their boyhood, and they returned to it. On this coast they were in various employments. The seamen's union went out and obtained the necessary number of men to take care of all our ships up to this time.

The CHAIRMAN. They did actually bring in men?

Mr. DENMAN. There was a very large increase in the number of applicants.

The CHAIRMAN. What was done with regard to securing a supply of officers for our ships?

Mr. DENMAN. Of course that was one of the first problems that we had to consider when we enlarged the tonnage of the country. There were many suggestions made. The board had many meetings and deliberations over that problem. Finally Mr. Howard was brought to us—the gentleman who testified here yesterday—and we were very much impressed with his capacity and his intelligence and his then ideas. I say "then" because the plan developed very rapidly as he got more and more in touch with the sailors and the shipowners.

Senator BANKHEAD. When you say the agreement was to pay $60 a month as wages, do you mean that includes board, etc.?

Mr. DENMAN. Yes; that always does with a sailor. A sailor has a pretty difficult time on the Atlantic in some fleets. The practice has been to discharge the men as soon as the vessels arrived in port, and in that intermediate period they have to carry themselves. It is not like farm labor where they get so much wages, and board on rainy days as well as fair.

Senator BANKHEAD. Is there any agreement as to the character or quality of that food?

Mr. DENMAN. There are regulations in the LaFollette Act, and I understand that at present the standard of living, which is not so very much higher than in European countries, though pretty close to it, is regarded as fairly satisfactory. On the Pacific coast I think they live very much better than they do on the Atlantic, but then labor is universally better fed there.

Before I leave the subject of officering I want to speak about the various men that were chosen for the carrying out of these newly developing functions of the board. The board left a very large discretion wherever it found a capable director, such as Mr. Howard proved himself to be. I think probably the reason we were able to accomplish as much as we did in six months was our willingness to concede to these men the right to handle the activities we delegated to them or the suggestions they brought to us very largely as they developed under their own hands. We were not niggardly in delegating power and authority.

Senator NELSON. I have forgotten—perhaps the record shows—but can you tell whether Mr. Ferris was employed while you were on the board?

Mr. DENHAM. Mr. Ferris was employed about the same time that Gen. Goethals came to us. I think Mr. Ferris has testified here as to the date of his employment.

Senator NELSON. I think he did, but I had forgotten the date.

Mr. DENMAN. That would be somewhere about the middle of April.

Senator NELSON. We declared war on the 6th of April, I believe.

Mr. DENMAN. The address of the President to Congress was on the 2d, and you followed it with a declaration shortly afterwards.

The CHAIRMAN. Did you do anything with regard to the regulation of charter rates?

Mr. DENMAN. At the time this letter was addressed to you on May 5, due to sinkings and loss of tonnage in part, and in very large part due to a diversion from mercantile uses to military uses, the tonnage of the world had diminished to a point where the charter rate had risen to, in some cases, a thousand per cent over what it had been prior to the war. With it had risen, of course, the value of the ships that earned it, and the result was that Europe was not only bled by some very, very high munition contracts that were made in this country, but was bled outrageously by the enormous cost added to all things used and eaten abroad through the charter rate.

Our plan originally was to ask for the straight power of regulation of freight rates. That met opposition in Congress, and we finally left that question to be controlled by the commandeering and the export licensing laws. The law providing for the commandeering of ships enabled us, so far as our own vessels were concerned, to place all of them under commandeer, and, therefore, to let them out to such uses as we pleased.

The board had many deliberations over the amount of the charter rate, and along about the middle of July had practically fixed on a figure for commercial vessels not carrying passengers of from $5.50 to $7 a dead-weight ton. This was two and one-half or three times over the amount before the war, but it was a little over a third of what the vessels were then earning on the sea. Fifteen dollars per dead-weight ton per month was the going rate in New York along in the month of July, and coal was being carried to Italy for from $40 to $70 a ton that had been carried before the war for $6—coal that was bought for $5 a ton.

Now we were not in a position to enforce this law until the power was delegated to us by the President from Congress, and we never did actually express into a resolution the rate we had tentatively agreed on, nor did we care to until we could have had a full hearing from the shipowners. The shipowners were asking for a $10 rate, and they had a very reasonable argument for it. They said, "Our vessels have appreciated to a value three times or four times what it was before the war. Depreciation is coming as to the normal value immediately after the war closes. We ought to be permitted to write off that depreciation, because we can sell our ships at any moment at these high figures—we ought to be permitted to write off that depreciation of value in two or three years." Now, if you allowed them to amortize in the charter rate the difference between $225 a dead-weight ton, the then value of ships in the market, and $40 or $60 a dead-weight ton, it would come out in the neighborhood of $10 or $11 for monthly charter here. We felt that that argument ought not to prevail, for the reason that the number of transfers of vessels still in the United States during the war had been comparatively few. Nearly every man had had appreciation in the value of his vessel during his ownership and had had besides that three years in which to fill its coffers with the high tolls.

We communicated what we had done, how we had arrived at these figures, to the new board very shortly after its organization, and they after a consultation with the shipowners fixed the freight rate at between $5.75 and $7 for cargo vessels and higher rates for passenger vessels.

The CHAIRMAN. What was planned by your board regarding the freight rate charged to the shipper of the goods?

Mr. DENMAN. The high rate of charter of the vessel was of course based on the high freight charge for carrying the cargo. This we proposed to reduce by ourselves charging a reasonable rate in the vessels we commandeered and enforcing the same fair rate on all other vessels, whether of our own or other flags, by refusing export licenses to those who did not conform. We laid this plan before the Export Council, and it was receiving their favorable consideration at the time we resigned. The scheme required the commandeering power, which was not delegated to us till July 11.

The CHAIRMAN. What was done with regard to securing the transfer to the United States of contracts for the construction of vessels for the allies in American yards?

Mr. DENMAN. At the time the board was seeking for additional contracts the allied interests were placing with our yards enormous demands for tonnage. Practically all the available stockage of the United States then existing was taken up for contracts made in the months of February and March. Over 1,000,000 tons were let to British interests. When it was determined we were going to seek to stop the building of high buildings and bridges and concentrate that labor and material on the building of ships there was a very strong sentiment that if there was to be such a disruption of American manufacture, the product of that disruption in speeding up or the speeding up of labor should come into American ownership.

The chairman of the board was then appointed a negotiator to negotiate with the representatives of foreign governments, particularly the British, to secure releases of those vessels to the American Government. The negotiations were carried on for a number of weeks, and finally the British very graciously came to our point of view and Mr. Balfour wrote me a letter in which they offered to return the tonnage to our flag, or offered to permit the tonnage to be taken over by our Government, we assuming the contracts and retaining the ownership of the vessels. There might have been disharmony if we had been unable to secure this practical adjustment, but it was secured and that particular difficulty was overcome then. That was in the month of May, 1917.

The CHAIRMAN. Did the British Admiralty ask to have temporarily transferred to them vessels in order that they might get coal to Italy?

Mr. DENMAN. Really, the entire Italian situation, the supply of coal and munitions and other matters, were the subject of semi-diplomatic negotiations. I played a part in that, but I do not believe I would be permitted to state what transpired there. The fact was, however, that the British themselves received and are receiving now and utilizing a large number of American colliers and a number of American coal carriers that carry between the Capes and New England for their assistance.

The CHAIRMAN. Do you care to state anything further about that than you have stated?

Mr. DENMAN. With regard to the British, I feel we should have given them all that we did give them at that time. It was an awful wrench, but they needed it. There was not any question about their needs. These sinkings of the Germans had no discrimination in them. They caught the colliers. They caught the oil-carrying vessels. The British fleet had to be supplied. They were fighting our war. They had to be supplied with oil and coal.

The CHAIRMAN. You gave them all you could?

Mr. DENMAN. Yes. But with regard to giving them tankers, that was done on the advice of the Navy. That is, when the British would ask for tankers the Navy would be consulted, and we would act on their advice. We did not exercise that discretion, because we thought it was a military one.

The CHAIRMAN. What was done with regard to prohibiting our vessels from leaving our flag?

Mr. DENMAN. That is what I have before described. I come now to a place in my testimony where I want to speak of a personal matter.

In the first day's testimony before this committee it was stated here that during an alleged controversy between Gen. Goethals and the majority of the board, or possibly between Gen. Goethals and myself, some 15 ships had been ineptly permitted to escape from the flag. That testimony appears on galley 13 D. B., as I recall it, of the record, and if you will turn to page 42 of the printed record you will see the testimony has been deleted. The testimony as given by the witness was as follows:

The WITNESS. No; it was up to the Shipping Board to issue their commandeering order, and Gen. Goethals on July 13, I think—he did not issue any order but was about to issue an order when these differences came up, the differences between Mr. Denman and Gen. Goethals. I saw a letter wherein he stated that he was going to issue the order, but it was not issued when we came in, July 27, and we started and issued it August 3.

Q. Well, through the controversy in the Shipping Board we did let slip a lot of shipping?

A. Some one did.

Q. The first authority for commandeering had come from the President?

A. Yes; July 11.

Q. What I would like to know is how many ships of that character got away between the passage of the act authorizing the President to commandeer ships, June 15, and July 11?

A. I will look that up and will be glad to let you know about it. There were 15 ships from July 11 to August 3.

The words, "There were 15 ships from July 11 to August 3," should be inserted on page 42 in the sixteenth line; they are omitted there. The next question is, "That got away?"

The gentleman who made that statement subsequently discovered he was in error, and out of fairness and not to have it appear to reflect on me, he struck it out of the record. But unfortunately before this friendly act was performed the entire press of the country had reported the incident as the important development of the first day before your committee here, and from the New York Times clear through to the little country papers in my own State this serious and inexcusable negligence was charged in the headlines.

The fact is that I had told this witness there had been 15 ships lost by reason of the failure to pass a bill that we brought to you and that

you recommended here in the month of February, and he had confused in his mind those 15 ships with ships that were supposed to be lost during those last 11 days.

The truth is that during those 11 days neither of the ships named were lost, not even the two that were mentioned here on a subsequent day; because on the 14th of July, realizing that vessels would leave, I procured an order, which was sent to all the various collectors of the ports, preventing the departure of any vessels, and during that time no vessels constructed for foreign owners were permitted to leave. The two vessels referred to here, the *Poitiers* and the *Storviken*, were completed, but were here in port after July 24 and along into August; that is to say, after the time we had resigned from the board and after we had no responsibility concerning it.

So the unhappy part of this transaction is that the 15 ships were lost, over my protest, so strongly put that my repeated appearances in the Marble Room of the Senate were the occasions of caustic comment by the two gentlemen most vigorous in opposing the legislation we asked for. That legislation came out of this committee after long deliberation. We had differences of opinion on it, but we came to an agreement. It was presented to Congress in ample time to pass prior to the close of the session, and it provided that no vessel should leave an American port unless it went out under the American flag if it had been constructed during the period of the war. There were 18 vessels, in fact, completed during the period between the refusal to pass that act and June 15, when the act was passed. They amounted to over 80,000 tons gross, or 120,000 tons deadweight, and if we had kept them and administered them for that purpose we could have well taken care of a very large portion of the fuel shortage on the Atlantic coast.

Fuel is being carried to-day between the Capes and New England in ordinary carriers, not in coal carriers. There is a very large fleet trying to make up the deficit which would not have existed had the supply been augmented by the use of these vessels.

It is but fair to say this for the credit of the gentlemen with whom I was associated. We foresaw in February of last year exactly this congestion which would lead to this shortage of necessities and coal in our large cities, and in the memoranda which we sent to the President and which he sent to you this approaching shortage, due to lack of tonnage, was commented upon and made the main motive for pressing the passage of the law. I will introduce it later in the hearing.

I do not believe that we failed in any branch of our duties either in accuracy of foresight or in forming of plans and carrying them out to conquer the contingencies foreseen.

The interesting part of this is that on the 15th of August last the senior Senator from Massachusetts on the floor of the Senate criticized bitterly the acts of the Shipping Board, or the majority members, of whom I was one, because during the period between July 11 and July 24 three ships, or several ships, had been allowed to escape. The very thing he was complaining about he himself was primarily responsible for, because the ships were not lost then, but were lost during the period when the law that he more than anybody else helped to defeat would have saved the situation.

No man likes to find that he is being pilloried for another's offense. In this regard the confusion of mind was so great that even the leader of my own party, Senator Martin, labored under the impression and said in the Senate that a number of vessels had been lost during the period between July 11 and July 24——

Senator MARTIN. Mr. Denman, you are entirely mistaken about that.

Mr. DENMAN. Senator Lodge quoted you as making that statement.

Senator MARTIN. I do not know what he quoted, but I never made such a statement and never had such information.

Mr. DENMAN. I am very glad to hear that.

Senator MARTIN. I knew a number of vessels had sailed—I got that from Gen. Goethals—but no dates were given by him to me or by me to anybody else.

Mr. DENMAN. I am very glad to hear that. But Senator Lodge quoted you as having said it. It has been very distressing to me, because they said, "If your friends made that statement about you it must be true." Senator Lodge's statement appears on page 6620 of the Congressional Record and is as follows:

To pass out beyond the question as between Gen. Goethals and Mr. Denman, the Senator from Virginia [Mr. Martin], yesterday mentioned a case where in one yard there was one ship and in another yard there were three ships on the eve of completion, practically completed, to go under a foreign neutral flag. We could have requisitioned them. They all went to sea within a week under the foreign neutral flag. That had nothing to do with Gen. Goethals. He had no power to take them.

There is a very general belief that the general manager and the chairman permitted their personal differences to blind them to the tragedy of conflict of the nations and make them forget that on the success or failure of their shipbuilding and operating program might depend the continuance or destruction of democratic institutions throughout the world. I trust my testimony here may serve in part to quiet this unjust criticism and to show the true extent of the creative work of both the board and Gen. Goethals.

Congress did not pass our appropriation till June 15, and the President did not delegate to us the power to use it till July 11. Without power, however, we had on July 13 contracted for a steam tonnage equal to two-thirds of our total over-seas fleet before the war. I am now reading substantially verbatim from Gen. Goethals' letter to me of July 13, 1917:

I. SHIPS NOW BUILDING.

Contracts for 348 wood ships have been let, or agreed upon, with a tonnage capacity of 1,218,000 tons, at a cost, completed, of approximately $174,000,000.

In addition we have under negotiation contracts for about 100 wood ships.

Contracts for 77 steel ships have been let or agreed upon, with a tonnage of 642,800 tons, at a cost of approximately $101,660,356.

There are thus provided 425 ships of all sorts, with an aggregate tonnage of 1,860,800, at a cost of approximately $275,000,000, besides 100 more wood ships under negotiation. I shall continue to let all contracts for wood ships (of design approved by the naval architect of the corporation) which I can secure from responsible bidders.

All this was within a period of six weeks, without power and without money. We had commenced, however, as soon as we felt certain of congressional approval.

Not one of these contracts was delayed in its execution. The longest period between its receipt by me with Gen. Goethal's O. K. and my signature was four days, and in that case a radical reduction in the steel-plate cost was made. If we were close enough together to provide for a tonnage so vast, it is obviously unlikely that we would have permitted any differences to lose us these few constructed or nearly constructed vessels.

Senator JONES. Well, Mr. Denman, it was very definitely reported that after we had the commandeering act but before the President issued the proclamation under it some steel ships had gone to Japan. What do you know about that?

Mr. DENMAN. I have heard the report. I have an idea that there was confusion there—I may be mistaken about this—between certain Japanese charters, which were being opposed, and Japanese tonnage. I think that is the way that rumor came about. There was also confusion introduced by the dispute whether or not we should allow any plates to go to the Japanese.

Senator JONES. It was stated that some steel ships constructed at Seattle were turned over to the Japanese. You do not know whether that is so or not?

Mr. DENMAN. No. My impression is that was not the case during that period.

Senator NELSON. Excuse me for interrupting. Do you remember the date of the passage of the commandeering act?

Mr. DENMAN. June 15.

Senator NELSON. How long after that was it before the order of the President was issued?

Mr. DENMAN. That was July 11.

Senator NELSON. The act was passed June 15 and the order was issued July 11. Well, what was the cause, if you know, of the delay between the passage of the act and the issuance of the order?

Mr. DENMAN. I really am not in a position to tell you, Senator. I will say it was not due to any of the alleged encounters between Gen. Goethals and myself.

Senator NELSON. And neither you nor Gen. Goethals was to blame then for the delay?

Mr. DENMAN. I am not saying that. I am saying there were no encounters between us that, in my opinion, occasioned the delaying of that order. The fact is—although I hardly dare say it, because it produces a smile wherever it is said—that there never was any personal conflict between Gen. Goethals and myself, nor any irritation in our personal contacts, unless possibly the last day we met, when it appeared that he had neither the Hog Island figures in the records of our corporation nor copies of the contracts of the vessels on our stocks to guide us in our commandeering plans. These differences will not obscure the really great accomplishments of Gen. Goethals, nor, we trust, the work of the board itself, which I am trying to outline here. I do not think we need go into that here, as it is fully set forth in my statement in the Congressional Record of August 15, 1917, at page 6615.

Senator NELSON. You need not go into that. You were president of the board. Now, after the act was passed on the 15th of June, did you make an effort to get the President to sign an order, and if so, when?

Mr. DENMAN. My recollection is that there was an order presented to the President a short time after the bill was passed. I have not the date with me.

Senator NELSON. Who presented it? You or Gen. Goethals?

Mr. DENMAN. I presented an order.

Senator NELSON. How long after the act was passed?

Mr. DENMAN. I can not give you the date, Senator, from memory.

Senator NELSON. Was it a week? Two weeks?

Mr. DENMAN. I possibly can find the exact date. My recollection is that I delivered it personally.

Senator NELSON. Well, how long after you delivered it was it before it was signed and issued?

Mr. DENMAN. Well, if I can not trace forward from the first date, I could not trace back from the last.

Senator NELSON. You can see that is a material point in this inquiry. First, how soon after the act was passed did you try to get such an order? And after you tried to get an order issued, how long was it before the President signed it? Those are material and important points that will help us to clear up this situation.

Mr. DENMAN. Senator Nelson, I have always understood that there was a convention in Washington which permitted the President to make his own statement as to the personal relationship, or personal meetings between himself and any officer under him. I should very much prefer to be permitted to observe that convention.

Senator NELSON. I do not want to interfere with that, but you can see, Mr. Denman, that without testimony on these points that I have interrogated you about we can not clear up this situation. I do not want to urge you to violate the rules you have indicated.

Mr. DENMAN. I will say, Senator, if you will permit me to comment, that in my opinion the tonnage loss in the period between June 15 and July 11 was comparatively small. I can find it for you. I think.

Senator NELSON. I understood there were two ships, one a Japanese ship and the other Norwegian.

Mr. DENMAN. No; that is a mistake. The two ships that were completed during that period were the *Stolt-Nielsen* for Norway and the *War Tune* for Great Britain. This is according to Commissioner Chamberlain's statement.

The *Stolt-Nielsen* had a gross tonnage of 5,729 and the *War Tune* a gross tonnage of 2,045. My impression is that the *Stolt-Nielsen* was still here and still within reach of a commandeering order in August. That is my impression, but as I had no responsibility for that period I did not look it up.

As to the *War Tune*, I do not know what happened to her. She was a small vessel, and the British were very expeditious about getting them away, and I imagine she may have gone. But all that can be said of her from this date is that she was finished prior to July 10.

Senator NELSON. I do not want you to understand that I want to embarrass you, but can you tell me, for my own information, from the time of the passage of the act up to the time the order was issued how many ships in all got away?

Mr. DENMAN. Only one——

Senator NELSON. In that period from the date of the passage of the act, the 15th of June, up to the 11th of July, the time the order was issued, how many vessels got away and what were they?

Mr. DENMAN. Let me call your attention to this. The statistics that have been furnished here and that have appeared in your record are the statistics of completion. After that the vessels have got to be loaded and various things done by the owner to get them in sea shape. There were three vessels completed during the period between June 15 and July 11. My impression is that all were here, except possibly the *War Tune*, on July 11, when the order was issued.

Senator NELSON. Did they all get way except the *War Tune?*

Mr. DENMAN. I say, my impression is they were all here except the *War Tune*. I do not know.

The CHAIRMAN. What was the other?

Mr. DENMAN. The *Astri*.

Senator JONES. I would like to know from what source we can get the information as to what ships went to foreign flags between those dates. I am not talking about when they were completed, but when they went from our country to a foreign flag. From what source can we get that information? There seems to be a sort of play on words. I judge from your statement that when we called for certain information they knew what we wanted, and yet according to your statement the information they gave us was as to ships completed. What we want is the ships that went to foreign flags during that period.

Mr. DENMAN. Let me give you a picture of the process, because it is quite complicated——

Senator JONES. Oh, it ought not to be complicated. Tell me where the source is.

Mr. DENMAN. I think I will have to give you the different aspects of the problem, some of which involve treaties and questions of international relations. The ships are built under two forms of contract. Under one the fabrication of the vessel from the time the keel is laid until the trial trip is completed is in the yard that constructs it. That vessel is an American vessel, although undocumented, until the transfer is made. Under another form of contract the fabric of the vessel is owned by the foreigner who is buying it. When that vessel reaches the water she is an undocumented vessel owned by that foreigner, and just as much his as if it were an automobile or anything else he had constructed for himself.

Now, in a sense that is a foreign vessel on launching. It is within the reach of our commandeering order, as any other property is, but it is a foreign vessel. Somewhere along the line there is a foreign documentation. Sometimes it is at the moment of launching. Some of the British ships on the Pacific coast were launched with their flags flying, and some other vessels were not documented until a long time after completion, on account of failure to get into communication with the home office.

Senator NELSON. Right there, allow me to interrupt you. Your power applied equally to both classes of vessels, did it not; those built under one form of contract and those built under the other form? You have as much right to commandeer one as the other?

Mr. DENMAN. Of course that is true of every ship on the sea, Senator. We can commandeer any vessel on the theory of war emergency. There is a dispute in international law as to this, but my understanding is we can commandeer any property within the 3-mile limit. For instance, we could go in and take all the Norwegian ships to-morrow that are in these ports, though they had been ploughing the seas for 20 years, assuming the absence of treaty obligations.

Senator JONES. Mr. Denman, where can we get the information as to the number of ships we could have gotten between June 15 and July 11 and that we did not get?

Mr. DENMAN. I will tell you, Senator, in doing that you want to start in with the 1st of March——

Senator JONES. No; I don't want to start in with the 1st of March; I want this information, and I want to know where I can get it. There is no use going back into the controversy over legislation before war was declared.

Mr. DENMAN. I do not agree. That legislation had reference to such domestic and internal troubles as the recent coal shortage. My reference is pertinent.

Senator JONES. I want to know where we can get this information as to these ships that we could have had and that we did not get between June 15 and July 11.

Mr. DENMAN. The reason I have described the process to you is this——

Senator JONES. I do not care anything about that.

Mr. DENMAN. It may not be a question merely of the physical possession of the ships. If it is a question of the clearances of the vessels, you can get that from the collectors of the ports. If it is a question of documentation, if you will go to the foreign office you might find when those documentations were issued. If it is a question of launching, then it is in the office of the Commissioner of Navigation. It is not a question one could answer by yes or no.

The CHAIRMAN. Would not the Commissioner of Navigation have the record of the documentation?

Mr. DENMAN. No; the documentation is arranged in this way. The only document which we issue to vessels built for foreign account is a document of value to the shipowner in the event he wants to bring the vessel back under the United States flag. A document simply certifying that the vessel was built in an American yard on a certain date. The vessels are examined by our officials at a certain time for the purpose of observation and recordation of the character of the vessel. That is the basis of these statistics that have been given here. They are examined after completion for the purpose of noting the completion and having at hand the statistics if the vessel returns to the flag. I think the only thing you will find from the Commissioner of Navigation is the statistics as to the completion of the ships.

The CHAIRMAN. Before you pass from that point, can you give the tonnage of the *Astri*?

Mr. DENMAN. Yes; the gross tonnage of the *Astri* is 1,722.

The CHAIRMAN. What ships were these? They were of what ownership?

Mr. DENMAN. The *Stolt-Nielsen* and the *Astri* are Norwegian and the *War Tune* is British.

Senator JONES. Mr. Denman, how can we disprove this report that two Japanese steel ships of 8,800 tons were completed in Seattle and passed to the Japanese flag between June 15 and July 11?

Mr. DENMAN. Well, there are two ways of doing that. I believe that if that were true, the statistics of the Department of Commerce would show the completion of the vessels, and the statistics of the Treasury Department would show the clearance of the vessels from the ports under the Japanese flag.

Senator JONES. And under what flag they cleared?

Mr. DENMAN. Yes.

Senator JONES. That is pretty satisfactory. Now, I want to ask you this. Under that law, could we not have commandeered any ship in our yards between June 15 and July 11?

Mr. DENMAN. Subsequent to June 15 the commandeering power was complete. There were, of course, international and treaty questions to be considered.

Senator JONES. To take any ship in our yards, being construected under either form of contract that you described a moment ago?

Mr. DENMAN. Yes.

Senator JONES. Now, we have records of all ships that are being built in our yards, have we not?

Mr. DENMAN. Yes.

Senator JONES. Where is that record?

Mr. DENMAN. In the Department of Commerce.

Senator JONES. And we have a record of all ships as they passed away from our ports. Where is that?

Mr. DENMAN. In the offices of the collectors of the different ports.

Senator JONES. That would be in the Treasury Department, then?

Mr. DENMAN. Yes.

Senator JONES. So that we ought to be able to get this information from those three departments anyhow?

Mr. DENMAN. Yes.

I want for a moment to turn to something that was said by Senator Martin. He suggested that Gen. Goethals had said that he placed on the "President's" desk an order for commandeering these partly completed ships lying in our waters, and that therefore the inference was that the President was responsible. I think he meant the president of the Shipping Board, because he did present to me on the 12th or 13th of July a form of order for commandeering vessels, but only those in their berths. That order did not cover these vessels like the three that we have mentioned, which were afloat and being completed in the stream. It was the receipt of that order from Gen. Goethals, which did not cover this other class of vessels, which led me to have issued the order forbidding the departure of these vessels from the ports when completed. I do not think that went to the President. I think he meant the president of the Shipping Corporation when he used that term.

Senator MARTIN. He may have meant that; I inferred he meant the President of the United States.

Mr. DENMAN. I think he meant the president of the corporation. He sent to me an order for commandeering vessels in their berths on the stocks. We sent back and asked for his statistics of foreign

contracts and costs, which, as I have said, he had not obtained. We were engaged in determining the form of the order when we resigned. But in order to prevent the escape of any vessels I had this other order issued, which has not been spoken of until to-day, which held the vessels in their ports so that they would be within reach.

Senator NELSON. Mr. Denman, suppose the day after the commandeering order was passed, you had asked the President to sign the order and he had signed it on the following day. Could you not then have kept a number of these vessels in the country that got away? I do not mean you personally, but could not the Government have kept some of these ships?

Mr. DENMAN. Wherever the executive power lay, whether it lay with the President or was delegated to anyone else, it could have been exercised on every ship of every nation, British, Norwegian, Spanish, or whatever it might be. The power you would invoke to stop these three vessels is a power you could apply to every ship sailing the seas. It is a very serious question whether or not one wants to enter into the extraordinary course of conduct of taking from neutral or allied nations their tonnage.

Senator NELSON. Mr. Denman, it seems to me you are arguing the case. The simple question is this. After the commandeering act was passed, if you had immediately asked the President to sign the commandeering order and he had signed it immediately or within a day or two after the act was passed, could you not have kept many ships under our flag that afterwards got away, or kept them in our service?

Mr. DENMAN. Senator, I have answered that before.

Senator NELSON. No; I do not think you have. With all due respect, I do not think you have given me a square answer.

Mr. DENMAN. It is not from any desire to evade you. We have had many cross-table differences, Senator, and I have never evaded you since our first interesting meeting last year, and I have the greatest respect for you.

But the fact in my opinion is, as I have stated, that the *Astri* and the *Stolt-Nielsen* were in American waters at the time the President signed the order, and it is possible the *War Tune* got away. That was a ship going to our allies, the British.

The CHAIRMAN. The 18, I understand, Mr. Denman, that you spoke of, got away before the act was passed, June 15?

Mr. DENMAN. The 18 are in the same position as all of these here. I understand the bulk of those sailed away. They were very largely British, and the British got their ships out immediately. They know how to handle ships.

The CHAIRMAN. Between July 11 and the time the board issued its order, based on the President's order of July 11, did any ships get away?

Mr. DENMAN. The record shows that the *Storviken* was here on July 24 and until after August 10. The *Poitiers*, a French coal vessel, was given freedom to leave by the Shipping Board on July 24, after we had resigned. It was on that same day. In order not to appear to avoid responsibility in the matter, while we did not pass on that, I myself would have voted to permit that vessel to go to the French Channel coal fleet, because as far as my personal view was concerned

I thought the French needed that vessel more than we did. She was a little vessel, and she just fitted into the Channel requirements. The other, the *Storviken*, I would have preferred to have kept. She was a good ship; but, Senator, I understand that she has a charter for two or three voyages on the Pacific, and she is carrying for American trade.

Senator NELSON. She is in our service now, is she not?

Mr. DENMAN. I do not think she is under the American flag, but she is under charter for our service.

Senator NELSON. She is working for our Government.

Mr. DENMAN. Is she under charter to the Government?

Senator NELSON. I think so.

Mr. DENMAN. I am not familiar with the present Government charters.

Senator JOHNSON. To make it perfectly clear concerning these five ships: After the commandeering order was made by the President and until action was taken by the Shipping Board, the only possibility of a ship that got way was the *War Tune*?

Mr. DENMAN. That is my impression, Senator, as to the three completed between June 15 and July 11. So far as our responsibility is concerned, the order of July 14 forbidding clearances to these vessels was all we could do immediately, as Gen. Goethals had not the statistics referred to. I have not checked up the clearances, but judging from the time these Norwegians remained in port rechartering and reselling their charters and waiting for chartering licenses from London and making and remaking their cargo sheets, they probab y were not away for some weeks.

Senator JOHNSON. And of the other two ships spoken of by Mr. Donald, one was permitted to go to the French trade because that was an appropriate thing to do, and the other did not get out from under the flag?

Mr. DENMAN. Both were held by our order till after we resigned on July 24, and then one went to the French and the other to Norway.

Senator CALDER. That did get away?

Mr. DENMAN. There was a letter of the board dated August 10, saying that if that vessel was documented under the Norwegian flag she could go. My impression is that at that time there had been made a number of charters which would keep her still in the American trade. It may be that there was an exchange, an agreement to let the flag go in return for an agreement to carry under charter.

The CHAIRMAN. So that practically the only vessel that was lost, if we might call it that, was the *War Tune*, of 2,045 gross tons?

Mr. DENMAN. Yes; and, of course, I do not know that she left.

Senator JONES. And you do not know how many ships got away, do you?

Mr. DENMAN. In the sense that the vessels cleared after documentation and registration I would not be able to testify.

Senator JONES. You do not know how many ships got away from our ports that we could have had under our flag during that time? You say we can get this information through these different departments. I gather from your testimony that you do not think they did get away, but you do not know whether they got away or not?

Mr. DENMAN. Now, let us go over that again.

Senator JONES. No; do you know or do you not?

Mr. DENMAN. I do as to some, as to others I do not. As to those evssels between the 15th of June and the 3d of July, I do not.

Senator JONES. That is all right.

Mr. DENMAN. As to those when my responsibility began, between July 11 and July 24, I know that none of them got away—those that fell within our control.

Senator NELSON. I assume from Senator Johnson's question that there were two orders; first, the order of the President, and then the order of the board. Is that the case?

Mr. DENMAN. It had to be so if the board was to act. The order of the President delegated the power to the board, and the order of the board was the exercise of that power.

The CHAIRMAN. The act of Congress gave the power to the President.

Senator NELSON. How long was it after the President delegated the power before the board issued the order?

Mr. DENMAN. That was August 3, as I recall it. I know that during the period from July 18 to July 24 the prime and pressing consideration of the board was the Hog Island contract. We were all so anxious to get that disposed of that practically all our energies were bent to that end.

The CHAIRMAN. Mr. Hurley testified that the order issued by the board was on August 3.

Mr. DENMAN. Yes.

The CHAIRMAN. Did you do anything with regard to the purchase of Austrian ships?

Mr. DENMAN. Yes; I negotiated that purchase on behalf of the President out of one of his funds; I have forgotten which one it was. Those ships were bought for in the neighborhood of $148 a dead-weight ton.

Senator NELSON. How many ships?

Mr. DENMAN. Seven.

Senator NELSON. Do you remember how much the tonnage was?

The CHAIRMAN. What was the total cost?

Mr. DENMAN. It was in the neighborhood of $5,000,000; the exact figure I have not here. That was between $50 and $75 cheaper, varying with the type of vessel, than any of the vessels sold in many months about that period. There was a long bargaining on that during a period of three weeks.

The CHAIRMAN. Were they completed ships?

Mr. DENMAN. They were Austrian ships in port that were injured, as the German ships were.

Senator NELSON. Had they been injured like those other interned ships?

Mr. DENMAN. All the German and Austrian ships were injured practically simultaneously. Most of the Austrians, however, did the job with very much less heart and efficiency than the Germans, so I am told. As a matter of fact, there were a number of Italian commanders of Austrian ships, and they slighted the work.

The CHAIRMAN. Was there anything done by you to establish a a bureau of intelligence of the movement of American vessels?

Mr. DENMAN. Yes.

Senator CALDER. Before you take that up I want to ask about these Austrian ships. Was there an effort made to have those ships taken over by Americans in a private capacity?

Mr. DENMAN. We bought them from Americans. They were contracted to be sold to two gentlemen, Messrs. Hurd and Carden, for $127 or $128 a dead-weight ton, with a limitation of use to South American and neutral waters. That is to say, the Austrian Government presumably put a limitation in the power of sale to the Austrian owners to use them in neutral waters. We were told that that was so the Austrians would be able to say to the Germans, "We have not sold any ships or taken any money for vessels that will supply a German enemy." I had great difficulty in trying to obtain from the Austrians a release of that limitation, because we were not then at war with Austria; and if we had taken the vessels over bound by the limitation and then broken the obligation—it was a mere covenant which we could have broken—we would have committed an act of bad faith toward a Government with which we were not at war.

I had a negotiator's intuition that this hesitancy to remove this limitation of use was simply a device to get more money. We finally put the question whether or not they would accept an additional sum raising the price from $127 to $180 a ton if the limitation could be raised, and they took the bait and said they would. "Well," we said, "if you will sell out the Austrian obligation to the Germans for $180, we are not going to pay you that amount, because it is a mere question then of barter and sale." In the course of those negotiations the amounts gradually worked down until we bought them for $148. We paid in two payments, as I recall it.

Senator CALDER. And the Americans you purchased them from paid $127?

Mr. DENMAN. They received exactly what they were out of pocket and the Austrians the rest; it was a gift on the part of that group of Americans. It was a very fine thing on their part, very beautifully done.

Senator NELSON. What did you do with the ships after you got them?

Mr. DENMAN. They were repaired, along with the German vessels, by that board that we constituted in New York. That was one of the largest accomplishments of the Shipping Board during the time of its activities.

Senator NELSON. What I want to get at, Mr. Denman, is have those vessels been employed in our service since then?

Mr. DENMAN. I have somewhere here the letter I wrote to Senator Lodge last year, in which I outlined this. I would be glad to offer that in evidence, if I may. I do not recall the names of all the Austrian ships, but in this letter I have grouped the German and Austrian ships together. The *Dora*, the *Ida*, and the *Clara* in this list I recall as being Austrian vessels. The *Dora* and the *Ida* went to Russia under our officers and men back and forth on one or more voyages, and the *Clara* similarly to France. The large fleet that we had gotten in operation by the 24th of July aggregated 180,000 tons for those ships. Here is the letter to Senator Lodge:

WASHINGTON, D. C., *August 21, 1917.*

MY DEAR SENATOR LODGE: My attention has been called to the recent remarks of yourself and your associate Senator Penrose concerning certain activities of the Shipping Board and my connection with them.

Will you not accept my appreciation of your forgetfulness of the unhappy difference that arose between us over your desire to surrender the tonnage in our yards to British

and other foreign buyers? The effort to conquer your bitterness of feeling must have been the greater since our debate occurred in the White House before the President and certain leaders of the Congress, some 30, as I remember it, and was followed by a vote in the Senate of 49 to 9 adverse to your position. The poise of a mellow maturity of spirit alone can account for your intimation to the Senate that you approached the criticism of the administration of the Shipping Board without any previous personal contact with its chairman and hence with unbiased judgment.

It is to Senator Lodge, the historian and accurate student and not the kindly and sympathetic Nestor of the Senate that this letter is addressed.

In the debate on August 15 you stated:

"The German ships were turned over to the Shipping Board. The two interned ships, which were warships, were taken at the same time by the Navy. They were put in order. They carried some of the first units to France. A few others, if I am correctly informed, four or five, were lent by us to some of the nations who are fighting in the same cause that we are. They are all at sea, if I am correctly informed, but the rest of them were turned over to the Shipping Board to repair and put afloat. There was no question of Gen. Goethals there. There was some 500,000 tons of shipping. That is a good deal at this moment of stress in the shipping world. Time went on, time went on; nothing was done; and finally the Secretary of War responsible for the transportation of troops, greatly to his credit, succeeded in having those ships transferred from the Shipping Board to the Navy, and within a few days they were all being moved. Some of them have been fitted already. The Navy has been able to find the men to do it, and those ships will all be at work in a very short time."

In practically every detail of this paragraph you have been misinformed and hence innocently conveyed an untruthful impression—certainly not the impression that the historian and careful investigator seeks to make.

1. The interned warships were not injured at all in the way that the merchant ships were. There can be no basis of comparison between the two.

2. No German merchant ships were "lent by us to some of the nations," etc.

3. Instead of nothing being done, the Shipping Board has repaired and put into commission and has engaged in transatlantic carriage, with its own officers and crews, the following German cargo ships. All were injured in their machinery and required very extensive repairs. Under the American flag and under our own crews the board is using them in transporting goods in the following trades. Many are on their second voyages:

Twenty-nine German and Austrian ships repaired and operated by the Shipping Board

	Deadweight.
To Italy:	
Arcadia	7,100
Allemannia	5,100
Clara Mennig	2,512
Magdeburg	6,800
Pisa	6,700
Prinz Oskar	5,800
Rhaetia	8,000
Total	42,012
To Russia:	
Dora	10,000
Harburg	6,500
Ida	7,000
Maia	4,286
Nassovia	5,950
Portonia	4,400
Total	38,136
To France:	
Adamsturm	7,000
Armenia	7,600
To France—Continued.	Deadweight
Clara	6,125
Ockenfels	8,879
Total	29,604
Quartermaster's Department, United States Army:	
Anna	2,360
Arcadia	7,100
Bohemia	12,100
Erny	10,100
McClellan	2,800
Pennsylvania	14,700
Teresa	5,700
Willehad	6,900
Total	61,760
Publisher's Paper Co.:	
Dora	10,000
Ida	7,000
Nassovia	5,950
Total	22,950

It is a pity your informant could not have discovered this in the nine days between the announcement that I was to seek to place a statement in the Record and your discussion of the board's accomplishments, or lack of them.

4. The following German ships were among those turned over to the Shipping Board. They were fast passenger carriers. The survey of the board determined us to recommend that they be used for transports. There was no dispute. The Army and Navy agreed with the result of our survey. The slightest inquiry at the board's office would have disclosed this.

Sixteen transports put under repair by the Shipping Board and turned over to Navy.

Amerika.	Koenig Wilhelm II.
Barbarossa.	Kronprinzessin Cecile.
Cincinnati.	Neckar.
Friedrich de Grosse.	President Grant.
George Washington.	President Lincoln.
Grosser Kurforst.	Prinzess Irene.
Hamburg.	Rhein.
Kaiser Wilhelm II.	Vaterland.

5. Instead of nothing being done all but three of these vessels were put under repair by the Shipping Board, many of them even before our estimates were approved by the Treasury Department. The others were put under repair in the navy yards.

6. When turned over to the Navy for transports they were under repair, under the Shipping Board's contracts, and they were still under repair under our contracts when the majority of the board resigned. None have yet made a voyage.

7. It will be no fault either of the Navy or the Shipping Board if the vessels now in the hands of the Navy are much longer in repair than those repaired by the board. The machinery damage was similar in kind, but the engines more powerful, and the parts much more difficult to replace.

8. You say the country "wanted ships and all they heard were these accounts of quarrels in the board and quarrels with Mr. Denman and troubles in Congress and no ships; and three golden months have gone. They are irrecoverable."

You come from a maritime State and, of course, know that ships can not be built in three months. Your remarks can have rationality only if the words "and no ships" are interpreted to mean "and no contracts for ships."

Instead the fact is that Congress voted us $500,000,000 for building ships on June 15, and on July 13 we had obligated the Fleet Corporation for 1,218,000 deadweight tons of wooden ships and 642,000 deadweight tons of steel ships, at a total cost of $275,000,000, and we had 100 more wooden ships of 350,000 tons under negotiation, to cost about $50,000,000.

This totals over two-thirds the size of our present ocean mercantile marine.

Senator Lodge, you reproach me for seeking fair prices. Do either you or Senator Penrose believe we would have had any more contracts for ships if I had not sought to reduce steel plates from $95.20 a gross ton to under $56?

Of course, Senator Lodge, one can easily understand Senator Penrose's attitude. I wonder whether you are moved by the same interest?

At any rate, I shall look with pleasure at your corrections in the Congressional Record of these eight errors of fact your misinformant led you to relate. It is rare that we find such an extraordinary succession of innocent misstatements. I consider it fortunate that they were made by a Massachusetts gentleman, upon whose fineness of spirit and nice sense of obligation to the verities I may rely for a generous redress.

Very faithfully, yours,

WILLIAM DENMAN.

Hon. HENRY CABOT LODGE,
Senator for Massachusetts.

Mr. DENMAN. I have not been able to find in the Congressional Record any correction of the errors as to these vessels. The *Dora*, *Ida*, *Nassovia*, and *Arcadia* are mentioned twice, repeated for their second voyages. The *McClellan* is a United States transport we converted.

Senator NELSON. And they were chartered in our service?

Mr. DENMAN. Those ships as soon as repaired were manned and officered by this board and given a place in active operation, and many of those are still being used by the board; some of them have gone over into the naval operations.

Senator CALDER. Mr. Denman, have you any idea of the number of vessels being built that way for England in our ship yards and were taken over as the result of the commandeering act?

Mr. DENMAN. I can get you some figures on that. The amount that was in negotiation between Mr. Balfour and ourselves was 1,025,000 tons or thereabouts. Some few of those were launched and I think permitted to go to the English. The reason for that was that the basis of our negotiation for taking the title to these vessels was the fact that we were going to speed up the construction, and those first vessels were so nearly completed that the speeding plans did not apply. In other words, we really contributed nothing to hastening the construction of these few vessels that we let go. The great bulk of that 1,025,000 tons remains with us. We must remember that under the commandeering law of June 15 we could only take title to these foreign vessels. If our law of February had passed these vessels would have been under the American flag in British-owned American corporations and we could have commandeered their use at any time.

Senator CALDER. Was not that a matter of difference of opinion as to the wisdom of that from our standpoint taking over any of these ships that England wanted?

Mr. DENMAN. You remember a vote in the Senate on that very subject on which the Senate voted, I think it was 49 to 6 in favor of retaining all alien tonnage under this scheme.

Senator. CALDER. I do not remember that.

Mr. DENMAN. Yes; on Mr. Smoot's motion. We were not out of accord with the vote of the Senate in those negotiations.

The CHAIRMAN. In regard to that bureau of intelligence, was something of that sort done?

Mr. DENMAN. Yes. The officials handling the tonnage of nations have an accurate account from day to day of where each vessel under the flag is. The British have and have had for a long time a very perfect record of the movement of all their vessels. I have forgotten the sum that is involved in obtaining that information, but it runs up into hundreds of thousands of dollars. We organized in the month of May, under a memorandum prepared by Mr. Brent and myself, through Mr. David Ewing, a bureau of intelligence of our ships: and that has been so developed under Mr. Ewing's management that you can go into the Shipping Board now and find out where any American overseas ship is practically at any moment of time that you desire to know her history. It also contains the movement and the owner and charterer and other incidental details of information on which any managing scheme must rest.

Senator NELSON. That information, under the present war conditions, ought to be private and not made public.

Mr. DENMAN. Well, for instance, it is like this: A man will come in. Here is his ship that he owns, and he wants to know where it is. He will go up to the Shipping Board, and if the man is not a suspicious person he can get his information.

Senator NELSON. But you do not publish the list, do you?

Mr. DENMAN. Oh, no.

Senator NELSON. It is not given out to the public?

Mr. DENMAN. No.

Senator NELSON. It is only for the information of those who own ships and want information concerning them?

Mr. DENMAN. Yes.

The CHAIRMAN. What, if anything, was done with regard to strengthening our mercantile marine after the war; first, in the type of vessels to be constructed and, second, in the character of operations during the war?

Mr. DENMAN. That is a matter in which I hope this committee will interest itself. No member of the shipping fraternity—and in a way we maritime lawyers are in that—has now any doubt that inside of a very few years, and probably inside of a decade, the greater part of the carriage on sea will be by motor-driven ships. The Diesel engine has been in use in this country for many years as a stationary power producer. A number of years ago Burmeister-Wain people, a Danish firm, perfected a seagoing Diesel that is now in practical operation.

Senator NELSON. The Diesel engine?

Mr. DENMAN. Yes. There is a line of vessels running out of Copenhagen and many out of Kristiania; the Copenhagen vessels going around the world before the war and the Norwegian line coming out to California, that made practical use of the Diesel for the last five or six years.

Senator NELSON. Those are small vessels, are they not, Mr. Denman?

Mr. DENMAN. That is what I am coming to, Senator.

Senator NELSON. Excuse me.

Mr. DENMAN. I have in mind three ships of a client, a countryman of yours, Senator Nelson, Fred Olsen, of Kristiania, now sending vessels to California. The largest of those is 10,000 tons dead-weight capacity, but with that dead-weight it has 13,000 tons space capacity. You can see what that means. They have been able to make such economies in the interior of the vessel's structure that on space, measurement applied to lighter and more bulky cargoes, she can take 3,000 more tons than the ordinary type of steam-propelled vessels. That vessel is the Norwegian *George Washington*. She has gone 22,000 miles at 12 knots, with practically no repairs other than those that could be accomplished in the repair shop on the ship. Twelve knots, mind you—and the fuel consumption is under 12 tons of oil a day. Why that is significant and why I hope this committee will not lose sight of it, is this: That vessel has a sailing radius of 32,000 miles with the oil in her water bottoms, and her economies of operation are very great. That 12 tons of fuel burned daily is against 45 to 50 tons on an oil burner and 55 to 60 tons on a coal-burning vessel.

The 22,000 miles she has made without repairs show the perfection of her engines, and the other statistics as to her use show that with a fleet of her type we—a nation without bunkers and depending on other countries for our bunker supply—will be freed from that obligation; we would also be able to take on our oil at the cheapest port where oil is sold and move around the world with it. The board had come to the conclusion before the time we had retired that somewhere along the line of our construction of these emergency vessels we should have somebody at work on the Diesel; that we should produce it. If the war runs two years, the economies of the Diesel in the war field will be of great value where cargo space is so needed.

At any rate, we ought to be perfecting it, so that after the war, when the Norwegians, Germans, and Swedes have those vessels, we may also have them and hold our place in the world's commerce.

Senator NELSON. They are going to install those engines on the cement vessels they are constructing, I understand it?

Mr. DENMAN. Yes.

The CHAIRMAN. Would it be agreeable to you to stop now, Mr. Denman?

Mr. DENMAN. I shall be glad to continue to-morrow.

The CHAIRMAN. Then, the committee will now stand adjourned until to-morrow afternoon at 2 o'clock.

(Thereupon, at 5 o'clock p. m. the committee adjourned to meet to-morrow, at 2 o'clock p. m., Wednesday, January 23, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

WEDNESDAY, JANUARY 23, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., in the committee room, Capitol, Senator Duncan U. Fletcher, presiding.

Present: Senators Fletcher (chairman), Ransdell, Martin, Bankhead, Simmons, Jones, Fernald, Calder, and Johnson.

The CHAIRMAN. We will now proceed with Mr. Denman. I believe that when we adjourned yesterday we were discussing the question of establishing a bureau of intelligence for the movement of American vessels?

STATEMENT OF HON. WILLIAM DENMAN, OF SAN FRANCISCO, CAL.—Resumed.

Mr. DENMAN. I think, Mr. Chairman, that I had finished with that; and was about to proceed with the question of the Diesel construction as a supplement to our steam output.

The CHAIRMAN. Yes; that is correct—the question of the type of vessels, and the character of engines to be placed on them, to be operated during the war.

Mr. DENMAN. We did not propose to make Diesel ships the exclusive type for the emergency. All that we hoped for was that, during the period of this enormous expenditure, a certain amount of money would be put aside for the development of engine factories, where the Diesel motor could be perfected on American soil. We felt, however, that if the war lasted for two years, we could obtain a certain number of those vessels, which, with the enormous demand there was for space, would be of greater value than other tonnage. That is to say, the cargo-carrying capacity of the Diesel vessel is so much higher than that of other ships that, even during the war, we would get some benefit from this type of construction.

We stirred up some people to attempt to get the engines under the foreign patents under construction in this country; and finally, the Cramp shipbuilding yard made us a proposition, in the month of July, to build a certain number of these ships. I have not the papers with me, in which their proposition was set forth; but they offered to build a number of ships within the next 12 or 14 months, of the Diesel type, for a figure less than that for which the tonnage is now being constructed with the ordinary type of steam propulsion.

And I again urge that this measure for aiding in our conquest of the seas after the war, with its incidental advantages during the war, be given your serious consideration.

Yesterday a number of questions were addressed to me by Senator Jones, Senator Nelson, and others, concerning the movement and the departure of vessels built for foreign account.

I came here prepared to meet your record, which was to the effect that two vessels had escaped—"gotten away," was the phrase used—during the period when the responsibility could be traceable to the board under my chairmanship. Now, as to the facts on those two vessels, I am certain both were in the ports of the United States and within reach of commandeer after July 24, when we resigned.

As to the advisability of commandeering either, or both, that was a matter, of course, for the Shipping Board to decide; but it involved certain international questions which had to be considered and a certain amount of negotiating with diplomats, a process that does not facilitate dispatch.

As to the vessels between June 15 and July 11 I did not prepare myself, and I was unable to answer the questions, which were fair questions, other than to suggest the source from which the information might be obtained. I was in the difficult position of a witness who has half knowledge, but is unable to give what the interrogator wants.

I have been able to look up for the committee since then one question, and that is as to the construction of tonnage for the Japanese and I find, on examining the report of the Commissioner of Navigation, that between March 10 and June 15 no vessels were completed for Japanese account.

The nations for which vessels were constructed during that time were Norway, France, Argentina, and Great Britain.

I hope to be able to obtain for the committee statistics that will answer your question before I leave the city.

Senator JONES. I will say, Mr. Denman, that I have written to both of the sources you mentioned yesterday, calling for the information that I wanted.

Mr. DENMAN. I see. Then that will relieve me from the obligation of obtaining it; but I felt the obligation, once the question was put to me, to clear it up. I did not feel the obligation when I came here to have that knowledge at hand, because it was not a subject to which I felt called upon to address myself.

The CHAIRMAN. I will state in that connection, Mr. Denman. that I telephoned to the Bureau of Navigation, in the Department of Commerce, this morning, for information on that subject, and I am just advised by them over the telephone—and this will doubtless be confirmed by letter later—that one vessel was built for foreign owners from January 1 to March 1, 1917, to wit, the steamer *Malmanger*, gross tonnage, 5,671; net tonnage, 3,510, and that was built for Norwegian owners.

Mr. DENMAN. Does it say where it was built?

The CHAIRMAN. No; it does not; it says for a Norwegian owner; that is all; but we can get that other information from them later.

Mr. DENMAN. I see. Then, apparently, from January 1 until the time covered by these lists—running up to August 3—no vessel was completed for Japanese account, so far as these records of the department show.

Senator JONES. Yes; but they do not show whether any were built for somebody else and then by them turned over to the Japanese.

Mr. DENMAN. No; I imagine not. I know we were surprised to find that the department of the Emergency Fleet Corporation that had charge of the gathering of information on those matters had not gathered it for us at the time when I issued my order stopping the exodus of ships. Gen. Goethals had felt that it was not necessary to get those contracts, and had not called for them.

The CHAIRMAN. Have you finished with that subject, Mr. Denman?

Mr. DENMAN. Yes, sir.

The CHAIRMAN. Then I will ask you about the Chinese crews, and their availability during the war?

Mr. DENMAN. The suggestion was made on the Pacific coast that we should augment our sailors by the use of the Chinese sailors, who have been employed on the Pacific Mail and other fleets, for a great many years.

I have had some contact with the question of manning with Chinese; I once tried a case—the case of the *Rio de Janeiro*—where we finally established that the Chinese crews, who could not speak the English language, were responsible for very considerable losses; in that case the loss of life amounted to several score. And I was one of those who advocated the language test of the La Follette Act.

Chinese make excellent fair-weather sailors, and they are, I believe, good sailors under proper conditions of training and education. The handling of junks on the China coast, which were crude, clumsy affairs, and which had to be out in the severe storms they have on that coast, developed a rather hardy type of seamen there.

The difficulty about the Chinaman when you put a white man over him, is that you not only have the barrier of language, but you have the barrier of race between them, and that unity of action and quickness of response that you desire in an emergency is very hard to obtain. English-speaking Chinese crews, however, have handled vessels with success; and I imagine it is possible to take the Chinaman, teach him English, and make him a fair sailor.

The CHAIRMAN. What do you think about the operation of the seamen's act—or the La Follette Act, as you call it?

Mr. DENMAN. I think in this respect the bill is a wise one. I believe, so far as the Chinamen are concerned, it can be met by teaching the Chinamen English, and then it will be within the requirements of the act. In normal commercial times on the Pacific coast, the great question is with the Japanese, who have cheap sailor labor——

Senator JONES (interposing). Do you think, Mr. Chairman, that we ought to go into the question of the seamen's act?

The CHAIRMAN. Well, we have gone into it quite considerably with other witnesses, and I thought that Mr. Denman's experience on the Pacific coast might enable him to give us some information that would be of interest.

Senator JONES. Then we probably will have a great many people who will want to come before the committee and discuss the various propositions that are being brought up in that way. However, I have no objection, if that is the desire.

Mr. DENMAN. So far as using the Chinese at this time is concerned, it would be losing a glorious opportunity to fill up our ships with

boys of our own race and blood and institutions. That is one of the chief things in which we have been lacking on the sea. And whatever may be said for the agricultural use of the Chinamen in the West after we have withdrawn our armies of millions of men to the other side, I do not believe we should consider for a moment the introduction of the Chinese into our mercantile marine under any circumstances.

The CHAIRMAN. What is there in the statement, or the intimation, that nothing was done by the Shipping Board during your chairmanship for the repair of German and Austrian ships? I do not know whether you have yet covered that fully or not.

Mr. DENMAN. That statement was made in the Senate by Senator Lodge. I do not know where he got his misinformation; but the fact is that a very large number of vessels were repaired by the Shipping Board; that we created a repair board, composed of the most efficient men we could find in the port of New York; that these vessels, prior to the time that we left the Shipping Board, were, a large number of them, in the actual carriage of supplies and munitions to the allies—operated by our own masters and our own seamen. The extent of that repair exterprise was enormous; it filled up practically all the yards, and a great organization and coordination was necessary, and was accomplished, to make those repairs in an efficient manner. I submitted to the committee a list yesterday of the vessels that were repaired.

The CHAIRMAN. Yes.

Senator CALDER. Were those ships repaired under you, or by the Navy Department?

Mr. DENMAN. All the repairs were initiated by us. Certain ships were turned over to the Navy for transport. Now, those Navy transport ships were completed under our contracts, with modifications of them by the Navy, but in private yards. All this is contained in the letter to Senator Lodge which I introduced yesterday.

Senator CALDER. Their repairs and alterations were made under your supervision, were they?

Mr. DENMAN. No, not those vessels which went to the Navy for transport and purely Naval purposes. On those we commenced the repairs and the Navy finished them. But those vessels which remained in the carrying of commerce, or commodities, were repaired by us.

Senator CALDER. Well, did not practically all of the Austrian ships that were taken over during the war go for transport purposes?

Mr. DENMAN. Oh, no. I think the list that I put in yesterday of the segregation will show as to that——

Senator CALDER (interposing). And for what purposes they were used?

Mr. DENMAN. For what purposes they were used at that time; that is, up to the time that Senator Lodge made his mistake in Congress. All the things are set forth in detail in that tabulation.

The CHAIRMAN. What did you have to do with the Hog Island shipyard, Mr. Denman?

Mr. DENMAN. Well, that was the subject of those apocryphal discussions that transpired in the last 10 days of our service.

The CHAIRMAN. I see. Well, that contract you never approved; it was approved afterwards by Admiral Capps and Mr. Hurley, was it?

Mr. DENMAN. No. The situation as to that was set forth in the statement that was read into the Congressional Record on the 15th of August last. It appears on page 6615.

A proposed contract was presented to us, which provided for the construction of a large Government plant on private land, and also gave a figure of compensation of $9 a dead-weight ton to those who gave the experience and overseeing management to the construction of that yard.

The matter that was in suspense at the time that the management of the Fleet Corporation was changed was as to the figures of the division between those things which were done outside the yard and not under the supervision of these managers, and those things which would be done in the yard under their supervision. You can see that a compensation of $9 a dead-weight ton for doing $25 or $50 worth of work in the Government yard would be quite a different thing from $9 a dead-weight ton for doing $125 or $130 worth of work in that yard. We were unable to get those figures at the time we left.

I understand that the contract that was ultimately signed provided that the yard should be built on Government-owned land, or on land on which the Government had an option at a certain price. Now, what that price is, I do not know. I know that Gen. Goethals told us that the value of the land was $880,000, some time in June or July. The contemplated plan was for a $20,000,000 or $25,000,000 investment on that land.

The CHAIRMAN. You never examined the land yourself, did you?

Mr. DENMAN. No; I did not go on the land; but I had very complete maps and outlines of it, and descriptions of it.

The CHAIRMAN. Was the American International Co. the company that was negotiating then?

Mr. DENMAN. Yes.

The CHAIRMAN. Well, we will have some more information about that Hog Island enterprise a little later, of course. Mr. Hurley and Mr. Piez have recently been up there, and they are prepared, I understand, to submit a report on it.

Mr. DENMAN. Well, I understand further in regard to that that the compensation that was fixed was very much less than that contemplated at the time the proposition was first given to the public by Gen. Goethals.

The CHAIRMAN. Mr. Denman, will you summarize for the committee the accomplishments of the Shipping Board during the period that you were its chairman? Just give us a general view of that, please.

Mr. DENMAN. Yes. I would like before doing that, Mr. Chairman, to say something regarding the question of wooden ships.

I think yesterday I made it clear that we regarded the wooden ship as an auxiliary and supplemental tonnage to the steel output of our yards. But I did not bring out the thing that is in the minds of a great many of us, and that is the fact that the demand for tonnage and the reasons for the demand for tonnage, are more acute to-day than at the time we made that statement of May 5 last that I read from yesterday. All figures as to sinkings are somewhat approximate; but from the study that we have given it we have a feeling of fair accuracy in our approximation.

It is reasonable to anticipate that, in the next year—I mean if you are making a war anticipation for the purposes of insurance against disaster—it is reasonable to anticipate that the tonnage sunk, of vessels of one nation or another, carrying to the allies in Europe will amount to not less than 6,000,000 tons. It was vastly greater than that last year, and any prognostication that puts it at a lower figure is an extremely hazardous and dangerous one for our safety.

Now, I am referring to sinkings. We must remember that the statistics that are given out by Great Britain, while they do not give the tonnage, do give what appears to be a statement of tonnage: They say "over 1,600 tons," and "under 1,600 tons." Really, from that you can gather nothing as to the amount, other than that the vessels are either coastwise or sea-going, because the distinction is merely one between the sea-going vessel and the coastwise or short-run vessel crossing the channel.

But the figure of 6,000,000 tons is given, based upon information that I had at the time I was chairman of the Shipping Board and some information I have gotten from some confidential sources on the other side since then. Now, those British statistics are only for the loss of British ships by sinkings.

During one of the early months of the war, the number of vessels that limped in, that had been torpedoed, was between 15 and 20 per cent of the sinkings, and those vessels fill up the yards; they require work to repair them, with a resulting loss during that period of time. And to this must be added the normal destruction due to the wear and tear of the vessels, which all shipowners figure on the books at about 5 per cent; it is lower than that, as a matter of fact, but it is an appreciable percentage.

In addition to that, you must figure a very large sum, which has been testified before this committee to be in the neighborhood of 50 per cent; I do not think it is as great as that, but I think it is fair to say that it is between 35 and 40 per cent—of loss due to the failure to get the ship over and back under military conditions in the same time as when they were operated under commercial conditions.

I am told on unimpeachable authority that a great tanker that made its voyages ordinarily 40 days for the round, is voyaging now 72 days for the round. The convoys must be waited for; and the vessel can only go at the speed of the slowest ship in the convoy. Military arrangements, all necessary, must be made for the movement of the vessel from one place to another; she must shift her voyage from one port to another, where the submarine activity is less. All these things tend to bring down the efficiency of the vessels.

So that you not only have your sinkings and your injured vessels, but you have the tremendous loss—and it is a real loss, just as real as if the vessels were sunk—due to military operation.

Senator JONES. What do you estimate the damaged vessels to amount to?

Mr. DENMAN. I say it was between 15 and 20 per cent in this one month that we had the account of it.

Now, I understand—I say I understand; I have been talking with shipping men and men from the other side—that the current opinion is that that thing is still occurring; and in a recent dispatch—I think it was in one of Beresford's statements—the fact was noted that

they were still failing to give out this additional loss in their tabulations there.

Assuming that the total loss reaches in the neighborhood of seven or seven and a half millions; and assuming—which I think is an extremely hopeful assumption—that Great Britain and the United States are able to produce 7,000,000 tons this year—I think that is really a scientific dream that we can realize only if all the circumstances come with us.

But assuming that, you have got to place on the debit side of the account a demand for from four to six million tons, newly created, for our soldiers and establishment on the other side.

We began the war, or, at least, January 1 of last year saw us 300 ships behind, for the orderly transport of the things needed by the allies. We have all of last year's losses over reconstruction; and we have the circumstances, as I have described them, facing us for this year.

All that we said in the early part of last year regarding the wooden ship applies at this time. It is not as good a ship as the steel ship. As time goes on, it may cost as much per ton to produce as the steel ship; I do not think it will, but it may as we drive more and more for timber. It is conceivable that it may take longer to construct than well-fabricated ships in well-developed yards.

But whether or not it costs more, and takes a longer time to build, and is not as good a structure when it is built, we can not afford to fail, or we can not afford to miss the opportunity to build any single one of them that the widest utilization of our resources will permit during the next year.

Now, the wooden ship scheme contemplated in the beginning a marshaling of the woodworking forces of the United States. That is a thing that could be pursued with practically no disturbance of the steel industry. We did much work with the Department of Labor; and their work was summarized in a letter of the department to us last June, which I offer in evidence, Mr. Chairman.

The CHAIRMAN. The letter from the Department of Labor to the Shipping Board may be inserted in the record at this point.

(The letter so referred to is here printed in full, as follows:)

DEPARTMENT OF LABOR,
OFFICE OF THE ASSISTANT SECRETARY,
Washington, June 27, 1917.

Hon. THEODORE BRENT,
Vice Chairman United States Shipping Board,
Munsey Building, Washington, D. C.

MY DEAR MR. BRENT: Replying to your oral query regarding the available supply of labor which could be called upon for the construction of wooden vessels at yards in the United States, I have consulted Mr. T. V. Powderly, Chief of the Division of Information, and Mr. J. L. McGrew, assistant chief of the same division, which is known as the United States Employment Service, and have to advise you that we believe this is a fairly accurate reflection of conditions in the labor supply:

	Present supply.	Aug. 1.	Sept. 1.
Shipwrights	5,000	7,000	Further increase.
Carpenters	10,000 to 20,000	20,000 to 30,000	100,000
Common labor	Scarce.	Fair supply.	All wanted.

The suggestion of 100,000 carpenters September 1 is based in part on the plan of the War Department to finish their cantonments about that time. Delay in such finishing would hold back this supply. As reports indicate a general slowing up of building operations, there may be a larger supply of house carpenters available than now can be noted.

If wages offered common labor is good, and they are not overworked—too long hours—it is probable that a fairly good supply can be had.

We expect a number of reports to-morrow giving labor conditions in various parts of the country, which I will be glad to epitomize for you if you desire.

From the reports received the past two days I condense these facts:

"In the State of Washington there is a good supply of ship carpenters, house carpenters, but not so many laborers.

"In California building is quiet and carpenters plenty. So in Arizona. In New Orleans carpenters are short. In Memphis there are plenty; and so in Minneapolis. In Ohio the labor supply is short. In Baltimore a few carpenters are to be had, but common labor is short. There is plenty labor in Texas, both carpenters and some common labor. In the mountain West labor is short. In Boston there is a good supply of carpenters, but common labor scarce. In the Middle West building operations are slackening, throwing men out of work."

May I, in conclusion, state that the Employment Service has listed some 18,000 carpenters, including many ship carpenters, and is being besieged by these men to know whether their services are wanted? We are ready to go after labor if the board wants it, and believe we can get a great many men, but would rather not issue any more calls unless the board intends actually to give the men work. It weakens the position of the service to ask men to register and then not direct them to work. If a definite call for men is issued, we can do fully as well as estimated, and perhaps better; provided that the wages given meet the local wage scales and transportation is paid to the yard from the worker's home.

Sincerely, yours,

C. T. CLAYTON, *Special Representative.*

N. B.—Perhaps I should add these facts, omitted from my letter above in the haste of preparation:

There are about 740,000 carpenters within the United States, of whom 215,000 are members of the Brotherhood of Carpenters in good standing and some 60,000 in "bad" standing—their dues not paid to date. This labor organization includes all woodworking trades; not only house carpenters, but shipwrights, calkers, and practically all woodworking tradesmen employed in the construction of ships. Probably 250,000 men could be used in shipbuilding, and if needed an intensive campaign can largely increase the numbers I have stated as available. I use the word "available" in the sense of being ready for employment on the dates specified, and amenable to the ordinary processes of employment.

Sincerely yours,

C. T. CLAYTON, *Special Representative.*

Mr. DENMAN. The estimates of the Department of Labor, whose representatives had been at work for a number of weeks on the matter, were that on August 1 we could have 7,000 shipwrights, 20,000 to 30,000 carpenters, and an adequate supply of common labor. They estimated that by September 1 they could increase the supply of carpenters to 100,000 men, from the numbers who were coming off of similar classes of work on the cantonments.

The plan required the marshaling of the engine-producing assets of the country.

Now, we did not want to disturb the steel plants. So we made a vigorous campaign and investigation of the upper Mississippi Valley, the largest cities there, and the Ohio Valley, the middle Western States—with the smaller machine shops, that were capable of producing the rather small and simple types of engines that we had designed or proposed for these vessels.

Our engineering forces reported that they would have an abundant supply of engines for, if necessary, a tonnage amounting to between 2,500,000 and 3,000,000 in the succeeding 18 months.

The real creation—if you can call it that—required by that enterprise was the production of the supply of lumber. Oregon and Washington and the northern part of California, but chiefly Oregon and Washington, contained these enormous forests; forests where the wood horizon is within 50 feet of the eye at times; great trees of marvelous symmetry of trunk structure, owned by those great lumber-producing concerns, nearly all of whom at that time were either making a bad way of it financially, or were just coming out of a great financial depression.

Now, the scheme could only work successfully, in a broad way, if the railroads to those logging camps were extended farther and farther into those great forests; if mills were enlarged, and a very considerable capital investment made by those different companies.

Some of the companies were in a position to finance their own extensions, but the bulk of them were not. Those who were were unwilling to put a dollar into those extensions, for the reason that there was continuously poured out of these Atlantic newspapers and from many correspondents on this coast, the story that the wooden ship scheme was not in favor with the Government; that it was a hopeless adventure, and that there was no use attempting to expand it. No man is going to put his money into extensions of plant where he finds that he is facing a political broil, the success of one of the contestants in which means his failure in his enterprise.

Now, what has been done for the steel producing industries of the Atlantic should be done for the wood producing industries, or the timber producing industries, of the Pacific. That is to say, there should be a sufficient number of advances to those great concerns on the coast to enable them to extend their facilities and get the timber that you need. And the thing has got to be done wholesale; the thing has got to be done on a broad basis; and, so far as the cost to the Government is concerned, it will be simply loaning the money, just as it has been advanced to the Bethlehem Co., and to many of the yards for housing.

It seems to me that political disrepute has laid its hand on all that expansion, and it may destroy the tonnage necessary to save us at least from great embarrassment in Atlantic carriage during the next year and during the continuance of the war.

We have no guarantee that the German submarine is not going to increase in number; we have no guarantee that this improved type which we all know of is not being fabricated in very large quantities. There is no reason why Germany should not turn out ships as efficiently as we turn them out; she has the material; she has the labor; and she has the power of organization. That they have not been able to do it before in greater numbers is due, just as it is with us, to the necessity of reorganizing the industry to fit the difference of type.

Senator JONES. Have you described fully the survey that the Shipping Board made with reference to the possibility of wooden ship supplies?

Mr. DENMAN. With regard to machinery, do you mean?

Senator JONES. No; especially with regard to timber.

Mr. DENMAN. With regard to timber, I am acquainted personally with many of the companies on the Pacific coast, and I know that all of them need extensions, or a great many of them need extensions of plants and roads in order to get into new tracts for the timber for a very

large campaign of this character. Now, the details of that have to be worked out, like any other details. We had companies coming up to us in May, offering us timber at fairly low figures, and stating that they would furnish us additional timber if capital should be advanced to them, at a figure that would be made by the Government itself, on a fair return for the amounts advanced.

Senator JONES. Well, from what you know of the situation, do you have any doubt that if a clear, definite policy is adopted and reasonable encouragement given along the lines that you suggest, there will be any lack of supply of timber for all the ships that we can reasonably hope to build?

Mr. DENMAN. Not in the least. And in that respect, I want to say that—again despite my friends of the press—after the first week in June Gen. Goethals and a majority of the board were in absolute accord. And during the month of June and early in July, he procured for us contracts for a million tons of wooden ships, most of which were actually executed; some remained to be executed on the day that he left. And the numbers in those contracts have been cut down, so the present figure may be under a million. But he actually negotiated to the point of having either executed or prepared contracts for wooden ships aggregating 1,218,000 tons, under a scheme that necessitated pursuing the broad policy I have outlined.

Now, I am going to read something that Gen. Goethals wrote——

Senator BANKHEAD (interposing). Before you do that, Mr. Denman, I want to ask one question. I do not know whether I correctly understood you or not; but I gathered from what you said that we have about reached the limit of shipbuilding material in the West, unless the facilities of the mills are extended to new fields. Did I understand you correctly?

Mr. DENMAN. I will not say that as to all the companies.

Senator BANKHEAD. But a great many of them?

Mr. DENMAN. A great many of them. Here is the situation on the coast: These enormous forests were purchased there by investors who anticipated a rather quicker depletion of the southern cut, or the southern supply. They were financed on comparatively short-time bonds, six or seven year bonds. These bonds began to mature about three years ago, and many of the companies have been in the course of either financial reorganization or actual reorganization of ownership.

And most of them were not in a position to make the extensions. Those that were in a position to make the extensions said, "What is the use? They do not want any wooden ships; the steel ship fellows are stronger than the wooden ship people"; and that is the way they visualized it on the coast.

Senator BANKHEAD. I understood you on that proposition; but the thing I want to get at is something that I tried to bring out here yesterday, or the day before, in this committee, that the situation is such that, if we are going to get a large addition to our shipbuilding materials in the West we have to give aid and encouragement to those mill companies to enable them to extend their logging roads and other necessary equipment in order to obtain the necessary timber. Am I correct about that?

Mr. DENMAN. I think there is no question about that.

Senator BANKHEAD. I have thought that all the time. Then your idea further is, that that can only be done by the Government advancing the money to those people who own the mills and the timberlands in order to construct those roads, etc.?

Mr. DENMAN. Or to make contracts of a broad character which would include enough to amortize a part of the extensions, which would be practically the same thing.

Senator JONES. Well, do you not think that if a definite policy of wooden ship construction was adopted, under which they could be satisfied or assured that a large tonnage of wooden ships would be built, many of those companies would, on their own account, extend their plants?

Mr. DENMAN. That is correct.

Senator JONES. That was what I understood; but the impression that Senator Bankhead seemed to have got from you was that they would not make the extensions unless the Government advanced the money for them; but if we had a definite policy you feel that many of them would furnish the money for the necessary extension of their plants?

Mr. DENMAN. I think they would if the definite policy included the making of contracts. Now, the policy might be reversed by the next management.

Senator JONES. Certainly.

Mr. DENMAN. The making of contracts that were binding, up to a point where they could amortize their investment, would be what was needed.

Senator JONES. Yes. In that connection, I want to say that I have received quite a number of letters from shipping plants out there, saying that they have been discouraged, and the production of lumber has been discouraged, because of the announcement one day that they were going to have shipbuilding contracts signed, and the announcement the next day that they were going to stop letting contracts, and these repeated announcements from time to time as to different policies.

Mr. DENMAN. Now, to come back to the statement of Gen. Goethals, which was written by him in June, 1917, but not published until September, in which he exactly expressed our view of the relationship of the wooden and steel ship to the emergency, I would like to insert this in the record; it covers 20 or 30 lines; but I will only read the last sentence. After some polite language toward the coast, he says:

> We must have all the ships it is possible to secure, both wood and steel, under contracts satisfactory to the interests of the Government and fair to the contractor.

I imagine that, had that been published in some of the Atlantic coast newspapers in June, we might have had a clearer understanding of the situation.

(The statement referred to is here printed in full, as follows:)

SUNSET MAG., *Sept. p. 11.*

On the building of ships to carry the sinews of war may rest the hope of democracy. The activities of the Pacific coast have not been confined to a particular class of vessel. They are constructing ships of both steel and wood—large steel cargo ships, wooden ships complete and wooden hulls for which the machinery will be furnished by the Emergency Fleet Corporation. The ready response of the Pacific coast to the country's emergency has been very impressive. The people of that section have seemed to be fully alive to the situation since the Government undertook its shipbuilding program.

Notwithstanding the contracts which have been awarded, many additional ships must be constructed; and I confidently expect that the Pacific coast will do its full share, if not more. We must have all the ships it is possible to secure, both of wood and steel, under contracts satisfactory to the interests of the Government and fair to the contractor.

GEO. W. GOETHALS.

The CHAIRMAN. Most of the publications seem to have been in favor of a steel construction and against wood construction; and the newspapers that I observed seemed to be persistent and determined upon stopping the construction of wooden ships and confining the operations to steel. And it had every appearance of having a fixed and set propaganda behind it for some special purpose.

What do you think, Mr. Denman, of the composite ship?

Mr. DENMAN. Well, I have a feeling against it, as all the shipping group have. But it is only a feeling. It is based on the difference in material, and the fact that your joining of the wood to the steel in the composite ship requires a material that is foreign to one or the other of the two materials joined.

The wooden ship is bound together very largely by wooden fastenings; more and more steel is being used for that purpose, but a very considerable portion of the joining of the ship is by strong pieces of wood, treenails, and similar devices.

Now, the rivet that goes through the steel is not a happy thing to secure wood with. I have never seen a composite ship. I am speaking simply from the impression that the seaport fellows had, that it was a good thing to try it out, but that it did not offer very hopeful rewards.

The CHAIRMAN. Well, it was said here yesterday that the composite ships that were ordered built—or, at least, that the Merrill-Stevens Co., whose representative was testifying, was building them at $136 per ton dead-weight, whereas the wooden ship was costing from $145 to $150 per ton.

And the information I have is that the composite ship is, perhaps, from 20 to 25 per cent better than the wooden ship.

But even if it was no better than the wooden ship, if we could build them for $136 a ton, would it not be advisable to do it?

Mr. DENMAN. Well, if by that you added to the total tonnage, I would say yes. I mean to say if you are not invading the construction of other types of vessels. If it adds to the gross of tonnage that goes out, I would say, "Pay any price for it that is fair."

But with regard to prices for ships, at that time, or just about that time, I introduced some friends of mine from the coast, who obtained a contract for the building of steel ships at a rate which about approximated $139 a ton on the Atlantic coast; I mean, you take Pacific coast prices and subtract freight, and they were building at around $139 a ton. It was the lowest contract for steel ships made.

Now, I have no doubt they could not duplicate those ships to-day within $40 or $50 a ton of the price that they cost then. It is very difficult to solve the elements in price, particularly that element which is added on for fear of the tax.

The CHAIRMAN. With reference to the general question which I asked you a moment ago, please state, in a condensed way, the accomplishments of the Shipping Board during the period that you were its chairman; we should like to have you state that.

Mr. DENMAN. This is a summary.

SOME OF THE POLICIES AND ACCOMPLISHMENTS OF THE UNITED STATES SHIPPING BOARD DURING ITS FIRST CHAIRMANSHIP.

1. The board, as its first act after its organization on January 30, presented resolutions urging the President to issue a proclamation invoking the prohibition of the shipping act against any vessels leaving the American flag during the then existing emergency caused by the shortage of tonnage. The proclamation was issued. The board during the succeeding weeks adjudicated a very large number of cases applying for transfer and refused transfer to other flags of all vessels, save two or three of special type built for foreign service, such as an ice breaker for the port of Archangel, and small steamers for the Cuban inter-island sugar trade. Its action retained for the United States a large number of small powered fishing schooners and yachts, which have now become the principal part of the fleets of the Navy for patrol against submarines on the Atlantic coast.

2. The board, both before and after Gen. Goethals's employment, sought and planned for and after June, 1917, obtained a huge increase in our steel tonnage. It placed contracts for 642,800 tons of steel vessels of various yard types and designed and laid the foundations of the organization for making fabricated vessels to exceed 3,000,000 tons.

3. It developed plans and stimulated the organization of new yards and obtained a large number of contracts for wooden vessels approximating a million tons as a supplement of the steel output. This was a creation of this supplemental tonnage out of a material not supposed available. Its plans for increasing the mercantile marine for the war emergency were begun five weeks before the war was declared and within four weeks of the board's organization. Between June 1 and July 13 it had let contracts, or agreed upon them, for 1,218,000 dead-weight tons of wooden ships and had under negotiation 100 ships more of 350,000 dead-weight tons.

4. Its negotiations obtained in June, 1917, a settlement of the seamen's wage question which covers a period to August, 1918. The American vessels on the Atlantic during the entire war have, by reason of this agreement, been free of those wage disputes which have hampered the efficiency of nearly every other industry.

5. Its negotiations and arrangements sought and obtained the steady and full supply of seamen for all American ships in the Atlantic. At no time since the war has there been any shortage of sailors in the Atlantic Merchant Service.

6. It successfully established navigation schools in all the maritime cities of both seaboards of the United States from which merchant officers are being created at the rate of about 300 per month—sufficient to supply the tonnage coming off the stocks.

7. It sought and obtained from Congress the power to commandeer the steel producing plants of the country, and was largely instrumental in bringing about a great reduction in the price of steel for building ships.

8. It advocated a largely increased use of Southern and Gulf ports for European shipments to relieve the rail and dock congestion at New York.

9. It planned and obtained legislation for regulation of the charter rate and tentatively arrived at a reduced charter rate substantially identical with that fixed by the present board and was prevented

from enforcing it only by the short period allowed after congressional power was delegated to it.

10. Its chairman conducted negotiations which brought the offer of the return to the United States of a million tons of alien shipping under construction on our stocks.

11. It foresaw in February, 1917, the conditions which led to the coal famine in our Atlantic seaboard cities during this winter and then sought legislation which would have added 18 steamers to our fleet, then under construction for alien account. This tonnage was sufficient, with proper use during summer and fall, to have alleviated and largely prevented the shortage of coal necessary for these cities. This legislation was defeated by the filibuster of February and March, 1917, and over the strong protest of the board through its chairman.

12. Its chairman negotiated for and bought a large fleet of Austrian vessels at the lowest figure of any sales for a period of many months.

13. It established a complete bureau of intelligence for the movement of every vessel in the American over-seas fleet. This bureau is able to tell the location, employment, destination, and voyage of all such vessels. The work done by this bureau is the essential basis of any effective plan of operation.

14. It initiated and largely carried out the rapid repair of the engines of the interned German and Austrian ships. It inaugurated camouflage and tried the Donnelly experiment for flotation of torpedoed vessels.

15. It established a policy for the operation of German and Austrian ships and placed in active operation with its own officers and crews many of these vessels in the carriage of food and ammunition to the allies.

16. It indorsed and established a policy of operation of these commandeered American merchant ships by their prior owners, so that existing shipping concerns would not have their organizations disrupted and the Nation thus weakened in its attempt to reestablish its maritime over-seas commerce after peace is obtained.

17. It advocated the control of exorbitant over-seas freight rates by making reasonable rates a condition of export licenses for carriage of goods by any vessel of any flag.

18. It urged the gradual introduction of the Diesel motor cargo ship during the program of constructing for war purposes. These ships with their great saving in fuel and cargo space, and around the world fuel radius, would make us dominate in maritime transportation after the war and free us from the necessity of using any alien bunker facilities.

19. It advocated the unified control of all American sea transportation by merchant shipping administrators.

20. It foresaw the continuing destructiveness of the German submarine and advocated and carried out by every means within its power the policy of building ships to the very limit of the productive capacity of the country's raw material, both of steel and of wood. It commenced the investigation into the availability of the concrete ship for steam propulsion. Within 40 days it executed contracts, or had them agreed on, for a production of tonnage equal to two-thirds the total of our over.seas fleet before the war.

21. Through the chairman as its negotiator at the conference with the Secretaries of War and of the Navy and the steel manufacturers

it advocated the purchase of all the steel output of the country by the Government at a fair profit to each producer, regardless of the fact that the purchase price would vary greatly between the so-called integrated and nonintegrated plant. The surplus not used by the Government it was proposed to sell to the manufacturers of steel articles at a fair uniform price.

Mr. DENMAN. There are one or two other papers I should like to have inserted in the record. I have the original resolution of the Shipping Board of January 31, 1917, regarding the invocation of the emergency prohibition law; and also the President's proclamation of February 5, 1917, adopting that recommendation and prohibiting transfers to foreign flags.

The CHAIRMAN. Those may be inserted in the record of the hearing.

(The papers referred to are here printed in full, as follows:)

RESOLUTION OF SHIPPING BOARD JANUARY 31, 1917.

Be it resolved, That, in the opinion of this board, there exists at this time a national emergency arising from the insufficiency of tonnage to carry the products of our farms and manufacturing industries to foreign customers of the United States, and whereas the shipowners of the United States are rapidly permitting their ships to pass to registry from which they can not be bought back without the permission of the Governments of foreign nations: Therefore be it

Further resolved, That we request the President of the United States that, acting under section 9 of the act of Congress creating the United States Shipping Board, he declare by proclamation that a national emergency does exist and that no vessel registered or enrolled and licensed under the laws of the United States shall, without the approval of the United States Shipping Board, be sold, leased, or chartered to any person not a citizen of the United States or transferred to a foreign registry or flag.

EMERGENCY IN WATER TRANSPORTATION OF THE UNITED STATES.

[1917. Shipping board circular No. 1.]

UNITED STATES SHIPPING BOARD,
Washington, February 6, 1917.

To shipowners and others concerned in vessels registered or enrolled or licensed under the laws of the United States, and all officers of the United States, charged with execution of laws thereof:

The following proclamation of emergency in water transportation of the United States is published for the information and guidance of all concerned.

[Emergency in water transportation of the United States.]

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

Whereas, Congress did by "An act to establish a United States Shipping Board for the purpose of encouraging, developing, and creating a naval auxiliary and naval reserve and a merchant marine to meet the requirements of the commerce of the United States with its Territories and possessions and with foreign countries; to regulate carriers by water engaged in the foreign and interstate commerce of the United States; and for other purposes," approved September 7, 1916, provide that "during any national emergency the existence of which is declared by proclamation of the President no vessel registered or enrolled and licensed under the laws of the United States shall, without the approval of the board, be sold, leased, or chartered to any person not a citizen of the United States, or transferred to a foreign registry or flag":

And whereas, many shipowners of the United States are permitting their ships to pass to alien registers and to foreign trades in which we do not participate, and from

which they can not be bought back to serve the needs of our water-borne commerce without the permission of governments of foreign nations;

Now, therefore, I, Woodrow Wilson, President of the United States of America, acting under and by virtue of the authority conferred in me by said act of Congress, do hereby declare and proclaim that I have found that there exists a national emergency arising from the insufficiency of maritime tonnage to carry the products of the farms, forests, mines, and manufacturing industries of the United States to their consumers abroad and within the United States, and I do hereby admonish all citizens of the United States and every person to abstain from every violation of the provisions of said act of Congress, and I do hereby warn them that all violations of such provisions will be rigorously prosecuted, and I do hereby enjoin upon all officers of the United States charged with the execution of the laws thereof the utmost diligence in preventing violations of said act, and this my proclamation issued thereunder, and in bringing to trial and punishment any offenders against the same.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this 5th day of February in the year of our Lord one thousand nine hundred and seventeen and of the independence of the United States of America the one hundred and forty-first.

[SEAL.] WOODROW WILSON.

By the President:

ROBERT LANSING,
Secretary of State.

The text of the law referred to in the proclamation is contained in section 9, paragraphs 3 and 4, of the shipping act, approved September 7, 1916, and is as follows:

"* * * during any national emergency the existence of which is declared by proclamation of the President, no vessel registered or enrolled and licensed under the laws of the United States shall, without the approval of the board, be sold, leased, or chartered to any person not a citizen of the United States, or transferred to a foreign registry or flag. * * *"

"Any vessel sold, chartered, leased, transferred, or operated in violation of this section shall be forfeited to the United States, and whoever violates any provision of this section shall be guilty of a misdemeanor and subject to a fine of not more than $5,000 or to imprisonment of not more than five years, or both such fine and imprisonment."

Attention of shipowners, agents, charterers, and others interested is directed to the fact that under the President's proclamation all officers of the United States charged with the execution of the laws thereof are requested to observe the foregoing proclamation and to see that its provisions are enforced so far as their respective duties are concerned, and all officials and employees of the United States are requested to report promptly through their respective departments any violations of the proclamation coming within their knowledge.

UNITED STATES SHIPPING BOARD,
WILLIAM DENMAN, *Chairman.*
JOHN A. DONALD,
J. B. WHITE,
THEODORE BRENT,
Commissioners.

Mr. DENMAN. I have here also the memorandum sent by the President to the chairman of this committee in February, urging the passage of legislation securing for us additional tonnage for domestic needs, a copy of which I gave to Senator Lodge. I should like to have that inserted.

(The memorandum referred to is here printed in full, as follows:)

MEMORANDUM FROM THE PRESIDENT TO THE CHAIRMAN OF THE SENATE COMMITTEE ON COMMERCE.

[Received by committee in the latter part of February, 1917.]

For the last six months, we have watched with growing apprehension a congestion arising from the overcrowding of overland transportation throughout the United States. Freight cars and other transportation facilities, scarcely adequate to serve the needs of the country in normal times, have proved entirely inefficient in the pres

ence of the unusual demands created by the war in Europe. Already the police are being invoked to quell disorders in our cities due to the dangerous increase in the cost of living.

The natural growth of our internal commerce had been prevented from exhausting the car supply by the very large increase in steamship tonnage carrying the products of the great States lying west of the Rocky Mountains through the Panama Canal to our eastern coasts and other destinations. The war in Europe added heavily to the burden of our land transportation facilities, both between points of manufacture east of the Mississippi and the Atlantic coast, and in the carriage of manufactured articles and raw material across the continent to the Pacific coast ports for export to Russia and Japan. The same extraordinary war necessities have, during the last two years, drawn away almost in their entirety the fleets bearing products from the Pacific coast to the Atlantic points of consumption into other channels of trade. The combined increased demand thereby created upon the freight car resources of the United States and the resultant decreased car efficiency by the crowding of freight yards has invaded the supply required to bring food and the necessaries of life to the great centers of population east of the Mississippi River. This in large part has assisted in causing the rise in the price of food and other necessaries.

While we have not been at war ourselves, the war abroad has been inflicting on our citizens a rise in the cost of living comparable with that created by the warfare actually in our midst at the time of the secession of the Southern States, and so far as the need of the man of small income in our great cities is concerned, he is as badly off as if ours were in fact a belligerent nation.

It was to assist in part in preventing an increase in this distress that the proclamation of February 5, invoking the law preventing the further transfer of our tonnage to foreign nations which refused to return any tonnage to our flag, was issued. The depletion, however, had already become so great that the commerce across the Pacific under our flag had almost disappeared.

At the same time, the facilities of our shipyards, which had greatly expanded during the war, were to a very large extent being utilized by the citizens of these same nations who were refusing to permit the vessels to return to our flag. Once under the foreign flag, the pressure of their governments to serve their needs will prevent a large portion of this tonnage ever returning to carry either to our own or foreign consumers the products stored in the already congested granaries, packing houses, flour mills, lumber yards, and cotton warehouses of our great interior and seaboard distributing centers.

To prevent this drain during the emergency, legislation was presented to Congress aiming to bring under our flag during that period the tonnage which otherwise would flow out of the yards into the fleets of alien nations and serve in large part needs disassociated from our own. The problem was to bring these vessels under our flag with the least disturbance to the business of the yards and the expectations of the foreign investors in these ships under construction, to the demand of whose capital the expansion in our yard facilities was in part due. The plan devised required that these vessels should remain under the American flag in American corporations in which the stock and control remained in the foreign investor, and, as in many cases the officers for the ships had already been provided from the country of the alien, and in some cases these officers owned a part of the vessels, they were to be permitted to command them during the period of the emergency. In this respect the measure was similar to that permitting foreign officers on the ships brought in under the Panama Canal act.

In the absence of this legislation, such American-built vessels in such corporations are already entitled to enter into the coastwise trade. The only compensation given to the foreign investor is this right to use these officers. As the number of American officers is already scarcely sufficient for our own tonnage, there will be no disturbance to the Americans in this provision, and since the number of these vessels which will go into the coastwise trade could not be expected to exceed the number of American vessels which had deserted it, there will be no serious competition between those vessels entirely officered by Americans and this new temporary class. Even should the competition of the foreign officered ship make a slight reduction in the profits of the American who had not forsaken the coastwise trade, the rise in coastwise rates during this shortage in tonnage and absence of competition, a rise borne by the consumer of the products carried, has far offset it.

The military gain in adding this tonnage, by careful estimate shown to be between 750,000 and 1,000,000 tons, to our merchant fleets is obvious. If the Norwegian capitalist owning a ship through one of these American corporations were to send his vessel on a voyage crossing the Indian Ocean, and our munitions makers should be

in need of a cargo of nickel, we could commandeer the tonnage for this service at some point near the place of production. The vessel, up to the moment of coming under the Government's orders, would be pursuing her normal vocation and earning her profit for her owner.

The governments of our foreign shipbuilding competitors have shown no such solicitude for aliens contracting for tonnage from their yards, when their needs required increased facilities for their own maritime trade. American ships, partially completed, have been lying on the stocks of these alien competitors of our yards for from 12 to 18 months, the labor having been commandeered for the building or other vessels.

The measures now before Congress are demanded by our obvious need, even in the absence of actual war. It is gratifying, however, to find that a number of yards have expressed their appreciation of our attempt to minimize the disturbance of their organization, and that the representatives of many millions of foreign capital engaged under contracts for these vessels have cordially approved this solution of the problem.

While the relief of the congestion due to the car shortage through the agency of this new tonnage in the coast to coast trade will not be immediately large, the rapid increase in tonnage as these vessels and their successors come off the stocks will be of material assistance to us in the not very remote future. Our hopes are that the whole situation may be cleared up by the restoration of peace throughout the world. But we can not be blind to the fact that causes now contributing so considerably to the high cost of living in our great cities may continue for a long period of time. We may have to invoke other agencies to lessen our distress, but the increase in facilities for over-seas carriage demands our instant attention.

Mr. DENMAN (continuing). I have also a copy of the bill, S. 8168, the legislation referred to in the President's memorandum, which was reported by this committee; and I should like to have two paragraphs from that inserted in the record; they are on pages 18 and 21, respectively.

(The extracts referred to are as follows:)

(Page 18:)

(5) During any war or when in the judgment of the President war is imminent a vessel now building or hereafter built in the United States, the contract for the construction of which was executed before this amendment takes effect shall not, without the consent of the board, go out of the physical possession of the builders or leave the harbor where such vessel first enters upon the navigable waters of the United States for any purpose other than to make its trial trip unless it is owned by a corporation organized under the laws of the United States, or of any State, Territory, District, or possession thereof.

(Page 21:)

SEC. 10. That the President, upon giving to the person interested such reasonable notice in writing as in his judgment the circumstances permit, may take possession, absolutely or temporarily, in all or in part, (*a*) for any naval or military purpose, of any vessel purchased, leased, or chartered from the board, or of any interest therein or charter thereon, or (*b*) when the United States is at war or when, in the judgment of the President, war is imminent, of any such vessel, or of any interest therein thereon, or of any vessel owned by a person a citizen of the United States, or by a corporation, partnership, or association, organized under the laws of the United States, or of any State, Territory, District, or possession thereof, or of any interest therein or charter thereon: *Provided*, That if, in the judgment of the President, an emergency exists requiring such action he may take possession of any such vessel or of any interest thereon or charter thereon without notice.

Senator JONES. That is from a bill reported when?

Mr. DENMAN. That was reported on February 20, 1917. And an amendment to this bill which was dated—it went through certain parliamentary convolutions and evolutions—made by Senator Smith of Michigan. Now, the opposition that developed to this scheme of holding these vessels under our flag was not essentially partisan. Senator Smith was one of the strongest supporters of the measure and it was supported by a good many Republicans.

The CHAIRMAN. Senator Smith offered that amendment on the floor and the amendment was accepted, was it not?

Mr. DENMAN. Yes, sir; he placed it as an amendment. As I recall it, you offered an amendment to the naval bill, Mr. Chairman, consisting substantially of this measure, that was passed by the committee here, and Senator Smith offered then his amendment, which he had had printed and which had been on the desk. You accepted his amendment, Mr. Chairman, as a substitute. I would like to have extracts from pages 5 and 9 of that amendment inserted here.

(The extracts referred to are as follows:)

"(5) During any war or when in the judgment of the President war is imminent or during any emergency caused by a foreign war a vessel now building or hereafter built in the United States, the contract for the construction of which was executed before this amendment takes effect, shall not, without the consent of the board, go out of the physical possession of the builders or leave the harbor where such vessel first enters upon the navigable waters of the United States for any purpose other than to make its trial trip unless it is owned by a corporation organized under the laws of the United States, or of any State, Territory, District, or possession thereof. The stock of such corporation may be owned, without restriction, by aliens, and the officers and directors of such corporation may be aliens to the extent that aliens are allowed to own stock and to act as officers and directors by the laws under which such corporation is organized."

"SEC. 10. That the President, upon giving to the person interested such reasonable notice in writing as in his judgment the circumstances permit, may take possession, absolutely or temporarily, in all or in part, (a) for any naval or military purpose, of any vessel, purchased, leased, or chartered from the board, or of any interest therein or charter thereon, or (b) when the United States is at war or when, in the judgment of the President, war is imminent, of any such vessel, or of any interest therein or charter thereon, or of any vessel owned by a person a citizen of the United States, or by any corporation, partnership, or association, organized under the laws of the United States, or of any State, Territory, District, or possession thereof, or of any interest therein or charter thereon: *Provided*, That if, in the judgment of the President, an emergency exists requiring such action he may take possession of any such vessel or of any interest therein or charter thereon without notice."

Mr. DENMAN. He offered it as a substitute for this, and then it went through certain parliamentary processes and was ultimately defeated; but it was defeated really in the consultations in the previous 10 days, when we were trying to persuade certain men to let the bill go through as a special emergency measure—war then being in prospect, and this congestion and shortage of tonnage was already causing a shortage of food supplies and coal on the Atlantic coast. Those in control of the filibuster refused to let it pass through.

Here also is the letter of May 5, addressed by the board to the committees of Congress interested in our proposed legislation. It is but fair to Mr. Stevens to say that he subsequently vigorously opposed our taking over the 1,000,000 tons of British ships.

MAY 5, 1917.

To the Committee on Commerce of the Senate of the United States and the Committee on Merchant Marine and Fisheries of the House of Representatives:

Congress passed the legislation creating the United States Shipping Board on September 7, 1916. On December 22, 1916, its members were appointed by the President, and shortly afterwards assembled in Washington for their preliminary organization. The appointments were approved by the Senate in the latter part of January, and on January 30 the board was formally organized under the law. At this time the maritime commerce of the world had been almost completely disarranged by the war in Europe. Your legislation created certain very far-reaching war powers in the board in expectancy that it would control the instruments of navigation and their use during the then existing emergency created by war conditions and during the war with Germany which to the members of the board then seemed imminent. In this statement we desire to present to you a brief account of our acts in discharging the stewardship which you created in us, to describe the conditions which have confronted us, and now confront the Nation in maritime

affairs, and to make recommendations based on the information which we have gathered in the performance of the functions committed to us.

The first important act of the board was a resolution requesting the President to proclaim that a national emergency had arisen from the disturbance of maritime transportation, due to the war in Europe, and on Febrauary 5 the President issued his proclamation invoking the sections of the act which gave to us the extraordinary war powers with which you had seen fit to invest us. Acting under the President's proclamation, we have prevented the further transfer of American tonnage to foreign flags, and have kept intact the total amount of tonnage of the United States since that date, with the exception of a few small vessels of specialized type, such as shallow-draft ships for the gathering of sugar in Cuban waters which ultimately was consigned to American refineries. Among other types of vessels we have kept under the flag all the small powered boats which might be useful for our Navy in the event of war, only allowing those to be transferred which the Navy Department indicated to us it either did not need or, since the declaration of a state of war with Germany, which that department advised us to be more available for use against the common enemy of the flag of a friendly nation engaged in the conflict.

On February 23, 1917, that is to say about three weeks after we were organized, and seven weeks before the declaration of war, the board recognized that a great danger to the food and munition transportation to the allied powers had arisen in the increasing efficiency of the German submarine. It made an inquiry among the steel-ship building yards concerning the available yard space for additional steel tonnage, and was advised by the yards that there was practically no possibility for constructing for Government account anything but an inconsiderable additional tonnage. Apparently the only available resource of the country for the further construction of tonnage was wood, and as many wooden ships driven by steam power and constructed from unseasoned timber were in successful use on the Pacific coast, it concluded to engage in an enterprise of stimulating the construction of wooden cargo carriers as a supplement to the output of the steel yards. It recognized that wood was a material inferior to steel for merchant vessels, but felt that the emergency required the construction of every available ton of shipping for immediate carriage on the North Atlantic regardless of the commercial character of the investment. The board's investigations were conducted chiefly under the management of Mr. F. A. Eustis, who first brought us assurances of the certainty of the supply of engines and impressed on us by his vigorous arguments the feasibility and necessity of such a plan, and by Mr. F. Huntington Clarke, who later joined the forces of the board. Both these gentlemen, it may be said, have refused compensation beyond the $1 a year salary necessitated by the provisions of our Statutes.

After a thorough canvas of the entire group of wooden ship builders on all the coasts of the United States and a careful estimate of the engine producing facilities, the board embodied its proposal in proper form and presented it to the President, who in turn referred it to the Council of National Defense. After deliberation by that body, it received its enthusiastic indorsement, and subsequently the approval of the President.

The plan proposed a standardization of the construction, in so far as it was practicable of application to the verying conditions in different shipyards already existing and to be created on all our coasts, and the combination of skilled shipbuilding labor with the better-class carpenters in general building construction, especially those engaged in bridge timber, mine support, and similar woodworking crafts. The experience in Pacific yards showed that one skilled shipwright using the sawed parts of the Pacific coast timber would make available from 7 to 10 of these mechanics from the other crafts. Since that time a very large number of old and newly organized yards have prepared themselves with material and facilities for engaging in contracts with the Government and are now awaiting an appropriation adequate to carry out the enterprise.

At about the time we made our inquiries as to further production of steel ships and subsequent thereto, over a million tons of steel-construction contracts had been let. These contracts, which have largely absorbed the present available stockage of our steel yards for a period of something more than a year, are for merchant types of construction, and are based in the prices and time of delivery on single-shift employment of labor. Nearly all these new contracts were placed by aliens who did not share with us our anticipation of the increasing efficiency of the submarine. It may be suggested parenthetically, however, that in Great Britain during this period practically all shipbuilding construction was on a double-shift basis.

The anticipations of the board have proved all too dangerously true. The rate of destructivity of the submarine has mounted steadily even beyond our calculations. A careful study of all the available sources of information which have come to your

board, and which we think exhausts all that is to be known in the United States, clearly indicates that the Germans are destroying shipping in the North Atlantic and Mediterranean at the rate of not less than 13,000,000 dead-weight tons per annum. The reproductive capacity of the steel yards of all the world under their present rate of reproduction plus all the wooden ships that can be built inside of a year, will give us not over 4,500,000 tons of new vessels. At the beginning of this year the allies had at their disposal for their North Atlantic and Mediterranean service, including charter of neutral vessels and the American ships in that trade, a supply of vessels several hundred short of the number required to maintain a proper transportation for their necessary food and war material and munitions. Unless the central powers be conquered on land, it is apparent from the above facts that Germany may be victorious within the year, provided the above ratio of destruction over reproduction is not changed.

The only resource left to the Shipping Board is the stimulation of production of steel tonnage, and the only method by which this can be brought about is by drastic concentration upon shipbuilding of all the steel producing and constructing agencies within the Nation. The first step necessary is the abolition of the slow-time commercial-ship contracts and the rushed completion of the vessels now started by double-shift employment of the yard labor.

It is apparent that if the Government is to furnish labor and material taken from other American industries and disrupt other American contracts and enterprises, it should own the ships so constructed. The next step is the creation of new ways in old yards and new shipbuilding yards to which shall be diverted the steel, labor, and facilities now engaged in the construction of steel and frame buildings and bridges and similar structures. A reasonably careful investigation among the steel manufacturers has proved the feasibility of the scheme proposed by the Secretary of Commerce several years ago for fabrication of the greater portion of the material entering into steel vessels at the many great fabricating plants of the country, and their assembling into the structure of the vessel at the seaboard or on the Great Lakes. A great bridge-building corporation, which has successfully met the competition of the entire world in a number of its enterprises, has seriously proposed to us to build 100 ships of over 3,500 tons dead-weight carrying capacity, the first to be delivered within six months and one ship a day thereafter. They plan the utilization of Secretary Redfield's scheme of standardized fabricating and assembling the parts thereafter at the shipyard.

The policy of the Shipping Board has been one of avoidance of an attempt in the emergency to engage in shipbuilding and repairing, or management with its own governmental organization. For its ship-construction plan, it secured the services of General Goethals, who had retired from the Army and was engaged in the private practice of his profession in New York City. In the very considerable undertaking of repairing the German ships seized by the Government, it created a board of experts engaged in the commercial construction, headed by Mr. Frank S. Martin, of New York City, with whom is associated Mr. Stevenson Taylor, the President of the American Bureau of Shipping, Robert McGregor, and other leaders in the special branches of shipping activity. In questions of management and distribution of tonnage it has sought the advice of a committee of American leaders in overseas shipping and commerce, among them being the following men: P. A. S. Franklin, L. M. Sherman, Frank C. Munson, D. Warden, H. H. Raymond, E. M. Bull, Crawford H. Ellis, and Lawrence K. Thurlow. Mr. Theodore E. Ferris, Mr. Edward Hough, Capt. A. F. Pillsbury, and a number of others are among its professional staff in the promotion of its shipbuilding program.

A corporation was created under the provisions of the act, of which Gen. Goethals is the general manager. This corporation has charge of the wooden-ship building program, but to it we desire to commit the larger enterprise of stimulating the steel-ship building production of the country.

The members of your board have been in consultation with the delegates from the allied powers, who are in Washington. They have quite freely given us the facts as to their war-time experience in maritime matters, and it is upon their experience, as well as our own observations, that we have outlined a proposed measure to meet the emergency. We have had particularly impressed upon us by the representatives from Great Britain the necessity for the concentration in a single governmental agency of the control of all existing shipping, and the creating of new tonnage. They have pointed out to us the disastrous effect of a disposition of this control among different governmental agencies. Until within the last few months the shipping of England engaged in war-time commercial transportation and the carriage of supplies and munitions primarily intended for their army was divided between the army and the navy and other departments. As a result of this division of authority vessels have laid

for months unused in English harbors and elsewhere, sometimes awaiting very remote naval possibilities. Others have laid at the dock for many weeks, practically as warehouses, in such harbors as Alexandria, in Egypt, when under ordinary commercial practice a prompt discharge would have freed the vessel for immediate use in transportation. Quite recently the British revised their system, placing the control of all their tonnage not serving an immediate naval or military need in a single governmental agency, which coordinates into the highest economic use all the tonnage of the nation.

The suggested legislation would increase the already considerable powers of the Shipping Board in the following respects: Upon the approval of the President the board would have the power to commandeer the title to any American ship afloat, or charter on her, or space in her, or to direct the use of the vessel without the exercise of the preceding powers. With such approval of the President, it could commandeer any shipyard or enterprise producing machinery or appliances needed in the construction or equipment of vessels. The board may also, with such permission, commandeer or dissolve any contracts now existing for the building of vessels, and thus make a double or a treble shift system of employment.

The legislation would give to the President the power to commandeer and convert into shipbuilding uses any enterprise or material engaged or used in steel construction for nonmaritime purposes, and control the transportation, both by land and sea, of the materials for ship construction. The bill does not contemplate the commandeering of any laborer, but it is anticipated that upon the cessation of any steel construction ordered by the President the labor will be diverted by contract into the building of ships. The President is also given power to suspend in his discretion any portion of the laws concerning the navigation, manning, officering, equipment, or inspection of vessels.

With the withdrawal of vessels from free commercial use into war service under Government control, a monopoly has been created in the remaining free vessels, and this monopoly in the face of heavy competition for space has raised the freight rates, and consequently the price of vessels to figures almost inconceivable before the war. It is apparent that this process will continue indefinitely as more vessels are sunk and more vessels are commandeered from free use to war service. In order to prevent further monopolistic charges of this kind it is necessary that a limit be placed upon the freight rates to be charged by all shipping entering or leaving the ports of the United States. This rate-making power, the legislation proposes to place in the board, and is an essential part of any general commandeering scheme. The British have very effectually controlled charter rates by administrative rulings made early in the prosecution of their war with the central powers.

The legislation proposes the creation of a board of appraisers to determine the claims of all persons who are damaged by the taking of their property under the provisions of the act It places a time limit upon the assessment of the damages and for the payments of the moneys found due. It requires proper notice and a fair hearing. The appropriation of the property is made first, and the determination of the award comes after, thus avoiding the unhappy results of the hasty emergency bargaining of the Spanish-American War.

It is expected that the expenditures may reach the sum of a billion dollars, a very considerable portion of which will be returned in earned freight rates. Our British friends have indicated a desire to cooperate with us by the surrender or transfer or cancellation of their contracts for mercantile construction in our shipyards, and it is anticipated that other nations engaged in meeting the challenge of our common enemy will give us a like cooperation. In Great Britain the labor was taken from ships built in its yards for foreign account, and for months the structures remained uncompleted and we understand were finally purchased by the English.

We desire to express here our very deep appreciation of the assistance rendered to the board by every agency of the Government which has been in any way properly connected with the shipping affairs. At every moment of the very active 13 weeks since our organization we have felt the sustaining friendship and cooperation of the men to whom your laws have committed activities affecting shipping matters.

In concluding, we may point out the following facts: At the present rate of destruction, if all the goods of the allies were carried in American tonnage which is properly constructed for the North Atlantic and Mediterranean trade, we would not have a ship left at the end of two months. The total tonnage available for transportation to the allies, leaving for the rest of the world only those ships necessary for food supply and the maintenance of war-making industries, outside the danger zone, would not exceed 16,000,000 tons. The net annual destruction, after deducting the present rate of reproduction, including the wooden ships available within a year, is not less

than 7,500,000 tons. Already there is a shortage of vessels for the carriage of necessary food supplies, munitions, and equipment to Great Britain and the Continent of Europe.

Very respectfully submitted.

WILLIAM DENMAN, *Chairman.*
THEODORE BRENT.
JOHN A. DONALD.
R. B. STEVENS.
J. B. WHITE.

The order stopping the sailing of newly constructed alien vessels appears on the record of the shipping for July 14, 1917.

Senator JOHNSON. Mr. Chairman, I want to ask a question concerning the Hog Island contract.

Do you remember, Mr. Denman, with what particular individuals you had any negotiations, or the Shipping Board had any negotiations, concerning that contract?

Mr. DENMAN. Well, it was the absence of negotiation, or participancy in it that was our chief difficulty; these facts that we desired from the manager of the company were not forthcoming. The figures that made up the total that we would pay were in the contract which this company in New York was being asked to sign—were in their New York office and not in ours. Now, I tried to get hold of these signatures. And a gentleman came down—I do not know which of the Vanderlip companies he was in; but he was form one of them.

Senator JONES. Who was the gentleman—do you know?

Mr. DENMAN. Harris D. Connick, a man who had very largely to do with organizing the World's Fair construction in San Francisco; a very able engineer. Mr. Connick was desperately anxious for us to accept the figures without looking at them.

Senator JOHNSON. Was Mr. Farrell interested in the negotiations, do you know?

Mr. DENMAN. No, I do not know about that. There is an interlocking set of directors there in that group of corporations or associations that I do not know all the ramifications of. Mr. Farrell was, I believe, on one board of directors. I was gradually being educated into them in the course of my experience here.

I asked Mr. Connick on Thursday, I think it was, and on Friday, on Saturday, on Monday, and, as I recall it, on Tuesday, the 24th, over the telephone—I may have missed one of those days—to please hurry to me the figures that had been promised me the day before or hurry them to Gen. Goethals.

At that time all the papers were filled with the furious contest that was going on over the question of wooden ships; that is, the papers on this coast were reporting it so.

Now, we never got those figures, and we just dropped the matter there, and it went into Admiral Capps's hands, and ultimately a contract was worked out at lower figures than Gen. Goethals's.

I want to say that I believe in a fabrication scheme. I want to say that it is entirely conceivable that, if we could have sat down with those figures and hammered it out, California fashion, with Mr. Connick and the other men, we might have gotten in a very short time at some kind of working adjustment of that situation—and we might not have done so. Of course, it is an evidence against that hope that they did not give us the figures during those five days. What they were doing during the five days I do not know, but I imagine they were making it fairly warm for the reputation of all

the parties concerned that were trying to defeat this price or investigate this price for the "know how." I know there was very bitter talk by those gentlemen about our refusal to accept without investigation.

Senator JONES. What gentlemen do you refer to besides Mr. Connick?

Mr. DENMAN. I am simply giving the "Street's" repetition of the gossip coming from the American International Co. I would not want to fix on any man, but the "Street" was talking about the wretched way in which these fellows were being treated down here, and the only way they could have learned about it was through the people of that company. Any banking concern will give you the interlocking directors there.

Senator JOHNSON. How large a proportion of the work was being done outside and how large a proportion inside the Hog Island yard, if you can give it approximately?

Mr. DENMAN. I can not give that.

Senator JOHNSON. Well, have you any way of reaching an approximate estimate?

Mr. DENMAN. I can give you a picture of it, but I can not give you the figures. I would not want to hazard a guess on the figures; but the engines, frames, plates—practically every particle of material that goes into the ship and goes into the equipment of the ship—is made outside the yard; and as the scheme was outlined to us in July, it was to be transported up to and into the yard by the outside merchants and manufacturers.

The only thing to be done in the yard, aside from assembling, was the fabrication necessary to fit in the plates where they failed to fit under their standardized construction and to do some additional punching along with the fitting of the plates.

Now, I have passed on a great many ship construction contracts; but I do not pretend to have the knowledge to give even fair approximation of what the division between the cost outside the yard and that in the yard should be. But one would think that the major portion of the work would be done outside the yard; that the mere assembling would be a minor part.

The CHAIRMAN. The yard was to put the parts together?

Mr. DENMAN. Yes; and put in the engines.

Senator JOHNSON. And that is the "know how" that has been described here, is it?

Mr. DENMAN. Well, I suppose so. That phrase was used all during the discussion—the "know how" of these men. And undoubtedly, if there is any "know how" lying around loose in New York that the efficient managers of those great concerns have not gotten hold of, it is because it is recently arrived.

Senator JOHNSON. That is, "know how" in various directions?

Mr. DENMAN. Yes. But I am speaking now of actual constructing power, as well as the ability to wrench or——

Senator JONES. And they do not give that away, either.

Mr. DENMAN. They do not give that away; they get a monopoly of it. That is what happens; they get a monopoly of the constructive power of men, as far as they can, and they pay liberally for it, and then they charge for it a monopoly value on the product.

Senator JOHNSON. They want the Government to pay liberally for that.

Mr. DENMAN. Well, I did not want to pay liberally to such a monopoly of "know how."

The CHAIRMAN. Do you happen to know the attitude of the people connected with the American International Co. and perhaps of the International Mercantile Marine Co. toward the legislation which established the Shipping Board?

Mr. DENMAN. No; I am not familiar with that. I know this—it appears in one of the documents that I have put in the record—there was a board of shipping men appointed by the Council of National Defense, made up of Mr. Franklin, Mr. Bull, Mr. Munson, Mr. Shearman, Mr. Werden, and Mr. Raymond—I think I have enumerated them all—that were consulted for advice on matters of operation, and from whom we received very great assistance. It was on this recommendation that Gen. Goethals accepted Mr. Ferris's services.

I know that these men finally came to the point of view that was suggested here yesterday regarding the handling of labor and the relationship of capital and labor during the war. We did not always agree and there were some pretty strong men in the group; there were some rather vigorous wrestlings at times, but on the whole those men were very efficient and very helpful to us.

And I think that since it has become apparent that the Government intends to lay its hands on shipping, or intended to lay its hands on shipping, there has been a fair cooperation by the shipowners with the Government. They have said, "See what we got during these three years; we ought to be fairly satisfied financially now."

There is one thing concerning the Austrian purchase. I have not seen any publicity on that, except in one paper; the bargaining that was done there was, so far as the gentlemen that represented the Austrian and the American purchasers were concerned, while it was vigorous, was entirely fair. I mean to say that those men were simply trying to get a good price for their vessels. The American purchasers who had the contract to purchase the vessels ultimately got no profit whatsoever, but turned the ships over to the Government for nothing, so far as they were concerned, and yielded a very large advantage that they had gained in their original contract.

Their original contract was approved by the Secretary of State before they entered into it. At that time we took occasion to express our appreciation of what they had done, and I did not want any of my remarks yesterday to be interpreted as a slur upon any gentlemen who entered into those negotiations.

Senator JONES. Mr. Denman, did any of the officials of the Government outside of the Shipping Board interest themselves in connection with this Hog Island controversy or contract?

Mr. DENMAN. Not that I know of. One thing that I have never known is what the organization of the bridge building concerns was for the supplying of the fabricated parts. I never got into that, and I never had time to investigate it. But there was a very complete organization of some kind made of those institutions; they saw that they were going to be out of bridge and building business very largely during the war, and they came together to keep their organizations going and make such profits as flow out of war in some other direc-

tion. I do not know the details of that organization; but there was a coming together of those institutions.

Now, aside from the reluctance to give us the figures, there was never anything in the Hog Island situation that called for any suspicion on our part.

Senator JONES. That controversy involved a controversy over what should be paid for steel, did it not?

Mr. DENMAN. No.

Senator JONES. Well, what was that up in connection with?

Mr. DENMAN. That was in connection with the price that should be fixed for buying steel plate; that transpired some time in May.

Senator JONES. And that was not involved in this Hog Island matter?

Mr. DENMAN. No. You see when we first attempted to get steel plates, the plate was running from 6 to 8 cents a pound. The fact is that there was a tremendous variety of prices all over the country; and we could not persuade those steels-ship building men that they could get plates for a large expansion of their production. And we finally pursued this course:

Gen. Goethals and I were both regretting that we had to build wooden tubs, and I suggested that I thought that if we put out a rumor that we were about to commandeer the steel plants we might stir them up a bit—to get a greater output of steel and a low price.

Now, I dropped that suggestion in various places here; and inside of two or three days I had a telephone call from one of the leading steel producers asking me to see him. I was not there; his name was telephoned in later on, and, at my suggestion, it was turned over to Gen. Goethals; and subsequently occurred the matters which were related in my statement in the Congressional Record.

But finally the price was fixed at 3¼ cents.

Senator JOHNSON. That was fixed by the President, was it not?

Mr. DENMAN. That was fixed by a committee appointed by him.

Senator JOHNSON. And that meant how much per ton?

Mr. DENMAN. Well, 2,000 pounds a ton would make it $65.

Senator JOHNSON. Had any price of steel been fixed before that?

Mr. DENMAN. No. Our contracts—well, there was an intervening period between the time I left Washington and the fixing of the price by this presidential committee. I do not know whether in that time any other price was fixed; the first contracts that came to me had the prices fixed, tentatively, at 4¼ cents.

Senator JOHNSON. And that means what, per ton?

Mr. DENMAN. That means $85 a short ton. And then we modified that. Well, that 4¼ cents was a tentative price, but was fixed as a basis; if steel got any cheaper than that, it was to be less. We had previously had an understanding that that was to be the final and absolute price, and then discovered that the figure was outrageously high, and made other arrangements.

But during this intervening period, the price in the contracts was fixed at 2½ cents, after the first few contracts at 4¼ cents; it was fixed at 2½ cents, with an agreement that if it were higher or lower the Government would get the benefit; if lower, and would have to pay more, if higher.

This was to enable the contractor, or the shipbuilder, to have a basis on which he could make his bid.

Senator JOHNSON. Well, did you fix it at that price—$50. Was that your figure?

Mr. DENMAN. That was the tentative figure placed in those contracts; I had no price-making power.

Senator JOHNSON. I understand; but the figure that was asked originally was $85?

Mr. DENMAN. Yes; all the transactions regarding the 4¼-cent price for steel plate are set forth in the Congressional Record, August 15, 1917, on page 668.

Senator JOHNSON. And you endeavored to fix it at $50?

Mr. DENMAN. I suggested that as a tentative basis. This is fully gone into in that statement.

Senator JOHNSON. I understand; and subsequently the President, through this committee, fixed it at $65?

Mr. DENMAN. Well, through this committee; I do not know whether the President participated in that.

Senator JOHNSON. Well, through the presidential committee, if you please; that was the sequence of events, was it not?

Mr. DENMAN. That was the sequence of events.

Now, my understanding is—and in this I may be erroneous—that the 3¼ cent price involves also the price of steel to our allies. In other words, that is not alone for sales to our own consumers in this country, but also for foreign accounts. Now, how large an amount that is, and what it is in the mass, I do not know. It is considerable. But we are not allowed, I am told, under that order to profiteer on the foreigner above 3¼ cents.

The CHAIRMAN. Do you know the price before the war—say in 1914?

Mr. DENMAN. I did know at one time. It was under $30 a ton. Some of the lake yards were getting steel for 1.80—between 1.80 and 2 cents a pound, in the year 1916.

Senator JONES. Mr. Denman, you know about how many contracts there are now for wooden ships, do you not?

Mr. DENMAN. No. That is already in the record, but I do not recall the totals; I do not think I ran down to the foot of it. I can give you here what we had——

Senator JONES (interposing). Well, this is what I wanted to get at: I assume that you have given the situation a very careful study; and I just wanted—if you care to give it—your conclusion as to what our state of ship preparedness, as it might be called, will be without a further expansion in our wooden-ship contracts.

Mr. DENMAN. Well, I have tried to summarize that by saying that we might hope to have an even balance of construction and destruction during the present year, with a four million to five million debit against us.

Senator JONES. That is in this summary that you have filed with the committee, is it?

Mr. DENMAN. No; that appears in the statement that I have made here—in this newly created demand for our soldiers and Military Establishment; because we have a very large establishment on the other side; we have sent over laborers of all kinds, apart from the——

Senator JONES (interposing). That is, in other words, we will be behind four or five million tons?

Mr. DENMAN. Yes; assuming, the figures I have given you regarding the military needs.

Senator JONES. Yes. Well, that is all I wanted to ask, then. We have a statement in the records as to those contracts?

Mr. DENMAN. Yes. The contracts which we had either actually signed, or which had reached the point where a complete agreement was had and the agreement had been entered on paper, but not signed, called for 1,218,000 tons of wooden ships, and we had 100 more under negotiation at the time of our retirement from the board.

The CHAIRMAN. Does that include the commandeered ships?

Mr. DENMAN. Well, that is just wooden ships alone. It does not include the 642,000 tons of standard steel ships, nor of course the anticipated output of the fabricating yards, nor the vessels building which were commandeered.

The CHAIRMAN. Wooden ships. That did not include any of the ships that you took over that were on the stocks; those were new wooden ship contracts?

Mr. DENMAN. Those were new wooden ship contracts, and outside of the steel contracts.

May I not in closing say something of the attitude of those of us who helped to organize the board and initiate its work toward those who have succeeded to the task? None of us has failed to follow with the keenest interest and sympathetic understanding the progress of the work as it has gone on under Mr. Hurley's chairmanship.

No one understands better than we the magnitude of the task. It is being handled with great energy and driving power. The showing of accomplishment in organizing for construction must be most gratifying to the public. Equal success in operating will be possible only if there is an equal concentration of power in the board, but this will necessarily come, unless we ignore entirely the lessons taught by the allies' experience. We believe that the country is at last able to look through the necessary confusions of organization and appreciate the gigantic machine which has been perfected. Whether it will be adequate to satisfy the need may depend on factors beyond its control, but we feel assured that no effort will be lacking which is within the understanding of the men now in charge. We feel sure that all these gentlemen will appreciate that our suggestions for developing the supply of timbers and labor are not critical of the past but are offered with an understanding of a present need for all types of tonnage and with the hope that they will be helpful in the immediate future activities of the board.

The CHAIRMAN. Yes. Are there any other questions?

We are very muchr obliged to you, Mr. Denman, for your statement; it has been very helpful to us.

(Mr. Denman's testimony is continued on page 2429.)

Senator JONES. Mr. Chairman, the two Messrs. Sloan are present and ask for an opportunity to be heard before the committee—Mr. Joseph Sloan and Mr. Phillip Sloan, I believe.

The CHAIRMAN. The committee will be glad to hear you, gentlemen, in the order you prefer; we will leave that to you.

At this point I will say that I have received a letter, addressed to me as chairman of the committee, from Seattle, Wash., dated January 17, 1918, from Mr. A. R. Smith, who is connected with the Marine News, of New York; and in the absence of objection I will have the letter inserted in the record.

Would the members of the committee like to have me read it now?

Senator JONES. I do not think it is necessary.

Senator RANSDELL. Is it in connection with the testimony of these gentlemen?

Senator JONES. Yes; he has visited the yards himself, and gives a personal statement as the result of his visitation.

(The letter referred to is here printed in full, as follows:)

NEW YORK MARINE NEWS COMPANY (INC.),
80 BROAD STREET, NEW YORK CITY,
Hotel Washington Annex, Seattle, Wash., January 17, 1918.

Hon. DUNCAN U. FLETCHER,
Chairman Committee on Commerce, United States Senate, Washington, D. C.

Dear SENATOR FLETCHER: Recently I read in the newspapers of the suggestion for the closing down of the Anacortes wooden shipbuilding plant. I called on Mr. Joseph A. Sloan, president of the Anacortes Shipbuilding Co., to ascertain the reason, which he could not understand, and he suggested my visiting the yard, which I did on Sunday last. If it is the desire of the Shipping Board Emergency Fleet Corporation to have all of the wooden ships built that it is possible to build, and within the shortest possible time, then there is no justification for the suggested dismantling of this Anacortes plant.

The shipyard is located on an island directly across an arm of Puget Sound, which is reached by a ferry built by the people of Anacortes at an expense of thousands of dollars only after the shipyard was established. The dismantling of this yard would impose a heavy loss on the owners of this ferry.

There are 22 acres of land included in the area covered by the Anacortes Shipbuilding Co., with a water frontage of 1,200 feet. Additional acreage and waterfront easily may be acquired. There are two wooden ships of standard Government size partly in frame, I should say nearly half-framed; the keels of two other ships have been laid, and the keel for another ship was partly laid.

The earth formation where the ships are built is of a character obviating the necessity of ways, the keels being laid on keel-blocks laid upon the ground. This cheapens the cost of building the ships and admits of their production with greater rapidity than is the case where ways must be built. The natural slope of the land toward the water conforms to the requirements of the builders without change in topography, again conserving initial cost and facilitating construction.

This establishment has a complete power plant, with a battery of five wood-burning boilers capable of generating 700 horsepower and of supplying enough power for the construction of at least 12 ships at one time; and if a less number than 12 are built the power plant necessarily is not operated to maximum economy. Am told it was installed with the understanding that as rapidly as possible at least 12, and possibly 14, wooden ships would be brought under construction. This power plant also supplies all of the power needed for running the electric lighting plant which covers the entire yard, including searchlights, so located as to facilitate night work.

In addition, there is a mill and loft building in which are two jig-saws and two band-saws, also two treenail lathes, the upper part of the building being the mold loft. There are 80 frames in a standard wooden ship. Each saw is capable of getting out at least three frames per day, I was informed, which places the maximum capacity of the saws at 72 frames for each week of six regular working days, without overtime; and the maximum production, I was advised, easily could produce frames for a ship a week.

There is also a blacksmith shop and a small machine shop; in it is a bolt-heading machine and furnace, also punch and shears, power drill press, and, of course, forge and anvils. A warehouse is a part of this building. There also are ample office buildings.

Railroad tracks run all through this yard for the economical handling of material. There is a locomotive crane with a lifting capacity of 20 tons, and traveling derricks running between each two ships, two of which are completed and a third is well along. Besides, there are three stiff-leg derricks for the economical handling of material off and on cars, etc. There is also a fine wharf with railroad tracks leading to it, and with a derrick on the dock capable of handling 10 tons at one time.

A boiler and salt water pump supply complete salt water fire protection service to each ship and to all buildings in the yard.

I was informed that at Anacortes timber for shipbuilding could be obtained more easily than in many other parts of the Sound, because the yard is so close to the basic sources of supply. There is a saw mill in the immediate vicinity of the city of Anacortes, I am told, that has been idle for three years, but that quickly and inexpensively

could be put into working condition and turn out daily 150,000 feet of ship timber and of the largest sizes required. Was told that 150 men were then employed and additional men could be obtained readily up to the capacity of the plant.

This is a going concern, in full operation, and with every facility for expansion as above described. To dismantle it, with the demands for ships so acute, would, in my judgment, be calamitous.

On my return to Seattle I was invited to visit the Olympia shipbuilding plant of the Sloan Shipyards Corporation, and this I did on Tuesday of this week. Here I found one of the most complete wooden shipbuilding plants I ever saw, and in full swing. The area of the yard is 15 acres, all under dock—a timber floor built upon piling. There are 800 feet of waterfront. Here eight wooden ships are in frame, four wooden motorships and four other wooden ships, all of standard Government size. A launching ways for the first of the motor ships was being constructed while I was there, and the first of these vessels, which appeared about completed, will evidently be launched soon. Am advised preparations have been made immediately to lay the keel of another standard wooden ship on the ways thus vacated, and the same in respect to each of the other ways, so that eveyrthing is complete for the rapid construction of eight wooden ships at a time as long as the emergency exists requiring these ships.

This yard is exceptionally well equipped with all kinds of necessary buildings: There is a complete saw and planing mill, the building, 180 by 50 feet, containing two air compressors. There are three tracks running through the yard, and a locomotive crane capable of lifting 10 tons. There is a fully equipped 2-story joiner shop—one of the finest I ever saw in a shipyard—100 by 60 feet, and with a separate open joiner assembling shop, also 100 by 60 feet: there is a separate boiler for heating and steaming the plant, and thorough fire prevention equipment throughout. There is another building, 100 by 50 feet, in which are a pipe shop, electrical shop, and store room; and an additional building, 100 by 40 feet, for men's tools and general storage.

There are two stiff-leg 10-ton electrically-driven derricks. Boats are being built in pairs, between each pier is a gantry crane for quickly and economically handling all material required in construction and equipment. There is also a 50-ton steam shear legs. With the exception of the locomotive crane and shear legs electricity supplies all of the power used in this plant.

At Olympia I was also shown all over the plant of the Capital City Iron Works, a subsidiary of the Sloan Shipyards Corporation. This is a hollow-tile 2-story building a large extension to which has but recently been completed. This plant contains a steel foundry, a gray iron foundry and a brsas foundry, machine, blacksmith and pattern shops. Th machine-shop building is 40 by 190 feet, the pattern shop and storage facilities occupying the upper story. The foundry building is 60 by 160 feet, these being the two main buildings of this exceptionally complete and thoroughly up-to-date plant, which was in full swing at the time I visited it.

Am told that while this plant is at all times held in immediate readiness to give priority to everything required for the shipyard, its economical administration depends upon an outside supply of job work during the periods when the plant is not wholly engaged in work for the shipyard, that this supply, especially in these times, is very easily obtained, and at prices that help make the works capable of producing high profits if efficiently managed. The efficient and economical upkeep of the plant and retention of its skilled employees, I am told, is dependent in large part on the outside job work necessary for its constant employment to capacity.

It seems to me that your committee might be interested in the statement of a wholly disinterested observer who has been visiting American shipyards frequently for over 30 years, prompted largely, in this case, by a desire to help prevent the consummation of what seems to me to be a great wrong. I am visiting the Pacific coast for the purpose of familiarizing myself, at first hand, with the facilities for ship construction and the methods and practices in ship construction. For these reasons my hope is that you will bring this communication to the attention of your Senate Committee on Commerce.

Of course, personally, I know but little regarding Messrs. Philip D. and Joseph A. Sloan, having never met either until I called at their offices to learn the cause and possible consequences of the troubles in which they have become involved. On all sides I hear expressions of warm sympathy with them, the highest commendation of their professional skill and business ability, their uprightness and integrity. It is felt by all with whom I have talked regarding the Sloans—and I have talked with many—that they are victims of unmerited and unjust persecution, altogether personal, because their professional and business standing seems to be unassailable. Both of the Sloans acquired their early experience in the building of ships on the Great Lakes, and they are sons of a master shipbuilder of high reputation on the Lakes in earlier years.

Both of the Sloans have been engaged in designing and building ships for a period of about 30 years. Mr. Joseph A. Sloan has been on this coast about 20 years, and is known all along the coast as a highly skilled, experienced, and competent naval architect and practical shipbuilder, many of the products of their minds and hands now being successfully and profitably employed on this coast and in its harbors.

I can not close this communication without adding that I have yet to hear, from the many people with whom I have mingled during the more than a month I have been on this coast, both in Portland, Oreg., and here, and people almost wholly engaged in maritime enterprises, any friendly or commendatory words regarding the district officer (Capt. J. F. Blain) of the Emergency Fleet Corporation, a gentleman, however, whom I have not personally met and with whom I have never had any communication. He has the reputation among those I have met and talked with regarding him as being dictatorial and arbitrary, exacting and harsh, and not according like treatment to all shipbuilders. There seems to be a degree of vindictiveness in the persecution of the Sloans unaccountable on any public grounds; and, as already stated, their professional and business ability quite precludes the possibility of substantiation of any charges respecting either their professional or business ability, or, so far as I have been able to learn, their honesty and integrity.

With warm expressions of my high esteem and regard it gives me pleasure to remain,

Very respectfully, yours,

A. R. SMITH.

STATEMENT OF MR. JOSEPH A. SLOAN, PRESIDENT ANACORTES SHIPBUILDING CO., ANACORTES, WASH.

The CHAIRMAN. Will you state your name, age, and place of residence, Mr. Sloan?

Mr. SLOAN. Joseph A. Sloan, 56 years of age; residence, Seattle, Wash.

The CHAIRMAN. How long have you lived in Seattle, Mr. Sloan?

Mr. SLOAN. For a period of 20 years.

The CHAIRMAN. What has been your business or occupation?

Mr. SLOAN. Shipbuilding.

The CHAIRMAN. What experience have you had in that occupation? State in a general way what you have done.

Mr. SLOAN. I have had a practical shipbuilding experience of more than 35 years; I started in in the city of Cleveland, Ohio, in the winter of 1875 and 1876 for my father, as a boy, and learned the trade of ship carpenter. At the age of 21 years I worked for the F. W. Wheeler Co., in West Bay City, Mich., as subcontractor, and for the Davidson Shipbuilding Co.; also for the Craig Shipbuilding Co., of Trenton, Mich., and was afterwards foreman in some of those different yards.

I worked in Chicago for Miller Bros., the St. Louis Sectional Dock Co., the Quail Shipbuilding Co., of Cleveland, Ohio, the Detroit Shipbuilding Co., and various other concerns on the Lakes, until 20 years ago this month, when I moved to Seattle from Cleveland.

I built a number of boats for the Klondyke in 1898, and afterwards went to work in Hall Bros. yard at Winslow, Wash., or at Port Blakeley, which is right across from Seattle. Hall Bros. had the reputation of being the leading shipbuilders on the Pacific coast, and I had a desire to familiarize myself with the Pacific coast way of doing work.

And from then on I have been engaged in that business in the Puget Sound country, building sometimes on my own account and sometimes on subcontracts for various companies.

The CHAIRMAN. What kind of ships do you build?

Mr. SLOAN. Wood ships entirely, of various kinds and sizes; also dredges.

The CHAIRMAN. What is your connection in that line of business?

Mr. SLOAN. I am at present the president of the Anacortes Shipbuilding Co., located on Guemes Island, across from Anacortes.

The CHAIRMAN. Is that a corporation?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. When was that formed?

Mr. SLOAN. It was formed in April, I think, of last year—1917.

The CHAIRMAN. What is the capital stock?

Mr. SLOAN. The capital stock is $250,000.

The CHAIRMAN. Who are the officers and the principal stockholders?

Mr. SLOAN. I am president. Mr. R. W. Hill, of Seattle, is the secretary and treasurer; and a number of Anacortes men: Mr. V. W. Wells, State representative from Skagit County, is one of the directors; Mr. Fred Cartwright, the manager of the Bank of Commerce of Anacortes, is another; and they, with a Mr. Connelly, who is manager of the Anacortes Lumber & Box Co., and myself, constitute the board of directors.

The CHAIRMAN. Is your brother interested in the company?

Mr. SLOAN. My brother?

The CHAIRMAN. Yes.

Mr. SLOAN. Not directly; no, sir; only in so far as the Sloan Shipyards Corporation have a small amount of stock in the Anacortes Shipbuilding Co.

The CHAIRMAN. Where is the Sloan Shipyards Co. located?

Mr. SLOAN. That is located at Olympia, Wash., the capital of the State.

The CHAIRMAN. Has it any relation to your concern, except that it owns some of the stock?

Mr. SLOAN. That is practically all.

The CHAIRMAN. And you are not interested in the Sloan Shipyards Corporation?

Mr. SLOAN. Only as a very small stockholder.

The CHAIRMAN. The Anacortes Co. has its own plant, has it?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. What does that consist of?

Mr. SLOAN. Well, at the present time the yard is prepared—that is, the ways and the keel blocking are down for six ships.

The CHAIRMAN. Well, begin with your foundations: What land have you got?

Mr. SLOAN. We have a water frontage there of 1,250 feet, with room to lay 12 to 14 keels.

The CHAIRMAN. How many ways have you?

Mr. SLOAN. There are only six at present established. The location is a solid ground formation, which does not necessitate the driving of piles; the keel blocking can be laid on the ground, and very economically done.

The CHAIRMAN. And you can slide the ships right off into the water from your land?

Mr. SLOAN. Yes, sir; to the ways that we have and launch them.

The CHAIRMAN. How much land have you back of that frontage?

Mr. SLOAN. We have an average depth from the water front of about 700 feet.

The CHAIRMAN. And what buildings have you?. What improvements are there?

Mr. SLOAN. We have a large wharf, with railroad tracks running to the wharf; and on the wharf is located a large derrick, capable of lifting 10 tons off of boats and barges; a large salt-water pump for fire purposes, and a boiler for operating the tools. A trestle leads from the dock up to the yard. In the yard proper there is a large building, something over 200 feet long, containing a blacksmith and machine-shop and warehouses. Just adjacent to that is a mill and mold-loft; the mill on the ground and the mold-loft for the laying off of the ships above. In that mill there are four saws, for sawing ship frames; two of them bench saws and two of them jig saws.

The tracks run on each side of this mill, and right directly back of the mill is the stiff-legged derrick, electrically operated, for the unloading of the timbers off the cars and the handling of the timber on to the platform for laying off, and then lifting it on the rolls to carry it through the saws.

On the other side of the mill—this is all planked over, not piled; the yard is graded and planked—there is a cut-off saw, in which the frames are cut off for fitting together, and a larger planer has been purchased for surfacing large timber and for edge-beveling the timbers.

This edge planer or beveling machine is something new. The first one was manufactured early in 1917 by the Stetson-Ross Manufacturing Co., of Seattle, who have patents and it is used—made so necessary now days because of lack of ship carpenters; that is, the men who formerly used to bevel these planks by axes and adzes. And then there is a large power plant there with 700 horsepower, a battery of five boilers, and two large electrical units, one direct current and one alternating current. The railroad track runs through the yard, and between the ships as laid down there are two traveling derricks. The frames are built out on a platform like this table, and afterwards are taken up by these traveling derricks and carried and landed back on the keel, and these derricks handle practically all the timber that will go into the ships. There are two keels laid and two ships a little more than half in the frame, and two other keels barely laid, and the fifth keel was laying on the ground 15 days ago.

The CHAIRMAN. These improvements have all been made there since you incorporated?

Mr. SLOAN. Yes, sir; this was a forest there on the 15th day of June, 1917.

The CHAIRMAN. How far is it to Seattle?

Mr. SLOAN. It is 100 miles, approximately.

The CHAIRMAN. What contracts have you?

Mr. SLOAN. We were building under subcontracts.

The CHAIRMAN. No; but what have you?

Mr. SLOAN. Six contracts from the Sloan shipbuilding contract. These were 6 of the 16 given to the Sloan Shipbuilding Corporation.

The CHAIRMAN. You contracted with the Sloan shipyards people to build six of the ships they had contracted with the Emergency Fleet Corporation to build?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Was that with the approval of the Emergency Fleet Corporation?

Mr. SLOAN. No.

The CHAIRMAN. They know nothing about it?

Mr. SLOAN. They do now.

The CHAIRMAN. They did not at the time; that was a matter between you and the Sloan people?

Mr. SLOAN. Yes; we did not question the right to do that thing.

The CHAIRMAN. Did you take over six of their ships at their figure, or did you pay them a profit on their contract?

Mr. SLOAN. We took over six of the ships at a little less than their figure, and for the reason that they were furnishing all of the material. We were to build the hulls at Anacortes and the hulls were then to be taken to Olympia, where the Sloan Shipbuilding Corporation have a large derrick for handling the boilers and a machine shop and foundry, etc., for the assembling of machinery and for the installation in the hull of the ship, which was not provided for at Anacortes.

The CHAIRMAN. How far is Anacortes from Olympia?

Mr. SLOAN. Approximately 160 miles.

The CHAIRMAN. Will you state how much less you were to charge for building these hulls than the Sloan Shipbuilding Corporation were getting?

Mr. SLOAN. We took the contracts from the Sloan Shipyards Corporation at $443,000.

The CHAIRMAN. For the six ships?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. What were they getting for them, do you know?

Mr. SLOAN. They were getting $490,000.

Senator JONES. But that included machinery, the complete ship?

Mr. SLOAN. Yes; that was for the complete ship.

Senator JONES. $490,000?

Mr. SLOAN. Yes; those were our figures for the complete ship, but they were to do a certain portion.

Senator JONES. I thought you simply had contracts for the hull?

Mr. SLOAN. No. We were building the hull, but in turn, recontractng with them to install the machinery which they had purchased. They contracted for all of the machinery for 16 ships previous to our taking this contract from them.

Senator JONES. I want just to see if I understand this. Were you to build each ship complete for $443,000?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. So they made a profit of $47,000 on each ship?

Mr. SLOAN. Of course, they did not make that profit. In view of the testimony that has been given here before, while I am not familiar with all the details—my brother will answer that afterwards—the connection between the Sloan Shipyards Corporation, and, of course, that I am not prepared to talk on, but I am familiar with the fact only that the Clinchfield Navigation Co. was to receive some commission, for the reason that the Clinchfield Navigation Co.—which my brother will explain later—had given the Sloan Shipyards Corporation a contract for 4 and had an option for 12 vessels a long time previous to the Shipping Board letting any contracts at all. My brother can better explain that.

The CHAIRMAN. The Sloan Shipyards Corporation had $490,000 for each of these completed ships, and your contract with them obliged you to complete them for $443,000?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Of course, whatever their overhead and other outside expenses were you had nothing to do with that, as I understand it?

Mr. SLOAN. No.

The CHAIRMAN. You have gone how far; what is the progress of that work?

Mr. SLOAN. On the 15th day of last month there were two ships half in the frame and two other keels laid.

The CHAIRMAN. Is there any delay now?

Mr. SLOAN. There has been for some time. Of course, there was a delay all summer.

The CHAIRMAN. What was the cause of that?

Mr. SLOAN. The inability to get lumber due in part to strikes in the logging camps and in the mills.

The CHAIRMAN. What time did those strikes occur, and how long did they last?

Mr. SLOAN. The strike took place about the 15th to 20th of July, and the bad effect of the strike lasted until late in the fall. While the strikes did not close the mills completely any more than three or four weeks—six weeks in the most extreme case—still the bad effects of the strike continued along until December and until now.

The CHAIRMAN. How much behind are you on your contracts?

Mr. SLOAN. Well, I should think at the present time four months at least.

The CHAIRMAN. On all of them?

Mr. SLOAN. Yes; that is the contracts, understand, that the Anacortes Shipbuilding Co. have from the Sloan Ship Yards Corporation.

The CHAIRMAN. And your time of deliveries corresponds with their deliveries?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Have those strikes all been settled so that you are getting material now?

Mr. SLOAN. The strikes have been settled, but the material is not being delivered as yet, not in a satisfactory manner.

The CHAIRMAN. Is there any way of removing that?

Mr. SLOAN. I have always thought so. We have the timber, as Mr. Denman has just recently stated, in the Northwest; it is in the woods largely and it is just a matter of coordination, being in the camps.

The CHAIRMAN. Is there any other yard in that vicinity?

Mr. SLOAN. There is only one other yard north of Seattle, and that is located at Bellingham, 15 miles north of Anacortes.

The CHAIRMAN. Do you have any trouble with labor?

Mr. SLOAN. No, sir; I have never had trouble.

The CHAIRMAN. Could you use more men than you are using?

Mr. SLOAN. Not at the present time.

The CHAIRMAN. You have got all you require to go on with your work as fast as your material can be had?

Mr. SLOAN. I thought so, think so yet. I do not think there is any trouble in getting labor there. One of the reasons the yard was established at Anacortes is that there is an island there which offers a splendid natural advantage, and it is close to mills that can get millions of feet of lumber out, if they only have the logs, and it is close to the timber, and it is a good labor market up to four hundred or five hundred men.

The CHAIRMAN. How far are you away from the mills furnishing you material?

Mr. SLOAN. There are a dozen mills within a radius there of 60 miles—some within 2 or 3 miles—and there is one large mill there, a splendid mill for cutting ship timbers—and all mills are not adapted to cutting ship timbers—and that mill is situated right across at Anacortes within an hour's tow of our yards that has not run for three years. It is in fine condition.

The CHAIRMAN. Is there any reason for that except that they did not have the logs?

Mr. SLOAN. No; they have not tried to operate it. The owners have been trying to sell the mill, and have had no desire to operate it. The mill failed a number of years ago.

The CHAIRMAN. How does this material come to you—by rail or water?

Mr. SLOAN. It comes by water. We are on an island and it comes on barges. But we have a gridiron—that is, piles capped—on which car, barges can land, and a trestle down there, so that we can take cars off of the barges. It is just a matter of laying the track; that has not been completed, but we have two tracks for the dock and up to the present time we have received no lumber on cars, but we have two cars in the yard, and the timber is unloaded off the barges onto these cars and hauled with a locomotive crane to various places in the yard and there unloaded. The tracks run all through the yard, and the yard is equipped to take cars off of a barge. There is a barge system on the sound, and the Milwaukee people will deliver, and so will the Great Northern, car barges anywhere.

The CHAIRMAN. Have you had any advance from the Federal Fleet Corporation?

Mr. SLOAN. Sir?

The CHAIRMAN. Have you had any advance from the Federal Fleet Corporation?

Mr. SLOAN. No. Our advances have been from the Sloan Shipyards Corporation.

The CHAIRMAN. How much have you had from them?

Mr. SLOAN. Up to about the 15th of last month we had in the neighborhood of $250,000.

The CHAIRMAN. That pretty nearly pays for the amount of work you have had done?

Mr. SLOAN. It very nearly did up to that time; yes, sir. Since that time I have been in active charge of the yard.

The CHAIRMAN. The work is still going on?

Mr. SLOAN. The work has been going on, but has not been making the progress that they made when I stepped out, for the reason, of course, that they were not getting the lumber quite as fast as I was getting it.

The CHAIRMAN. Are you out now entirely?

Mr. SLOAN. I have been out of the management up to the time I left, but I received, the day before I left Seattle, an invitation to come back and take charge of the work.

The CHAIRMAN. Who is in charge when you are away?

Mr. SLOAN. A Mr. Arnold, from Bay City, Mich.

The CHAIRMAN. Is he an experienced shipbuilder?

Mr. SLOAN. No, sir. I knew Mr. Arnold more than 30 years ago. Mr. Arnold was then a wood carver, and he afterwards went with the Brooks knocked-down boat builders, of Saginaw, Mich., and he has had quite an experience in building small boats, yachts, and barges. He is a very capable man and a man who learns quickly, and he is better than the average man going into the wood shipbuilding yards on the Pacific coast at the present time.

The CHAIRMAN. I do not know whether you care to say or not as to whether you propose to go back in charge.

Mr. SLOAN. Of course I can not say that at this time.

Senator JONES. Who put Mr. Arnold in charge?

Mr. SLOAN. A Mr. Eugene McAllaster.

The CHAIRMAN. And who is Mr. McAllaster?

Mr. SLOAN. Mr. McAllaster is the acting manager of the Sloan Shipyards Corporation.

The CHAIRMAN. I want to ask you, has not the Emergency Fleet Corporation practically taken over the Sloan works?

Mr. SLOAN. The Sloan Shipyards Corporation—yes, sir.

The CHAIRMAN. And then they are looking after your plant, too, are they not?

Mr. SLOAN. They are.

Senator JONES. And so this man was put in there by the Emergency Fleet Corporation?

Mr. SLOAN. No, sir; this man was put in there by the Sloan Shipyards Corporation.

Senator JONES. Is it not a fact that the Emergency Fleet Corporation has taken over the entire control of the Sloan corporation, so far as the building of these ships is concerned?

Mr. SLOAN. Yes, sir; it is.

Senator JONES. When they did that, did they take over practically the control of your works too?

Mr. SLOAN. They have.

Senator JONES. Are not they the ones who put this man in charge?

Mr. SLOAN. Mr. McAllaster claims to be acting for the Sloan Shipyards Corporation.

Senator JONES. If they had nothing to do with the contract any more than carrying it out, and the Emergency Fleet Corporation has charge of this, as a matter of real fact has not the Emergency Fleet Corporation, through its agents out there, put this man in?

Mr. SLOAN. No. They have agreed to his appointment by the Sloan Shipyards Corporation.

Senator JONES. Yes; and he could not have gone in there without their consent?

Mr. SLOAN. No; I do not think so. But, if you will please pardon me, this phase of that situation all through my brother can tell you more about than I can, for the reason that I am not an official of the Sloan Shipyards Corporation; I merely can tell you about the Anacortes Shipbuilding Co. and about practical shipbuilding, and th

things which, in my opinion, have delayed the program on the Pacific coast.

Senator JONES. What I wanted to bring out was that this inexperienced man was really put in there by the Emergency Fleet Corporation, that is, if that was a fact, as I assume it was by reason of their having taken over all of the Sloan work.

Mr. SLOAN. That is the position they assume. If you please, read these letters, which will explain a little more fully [handing letters to Senator Jones].

Senator JONES. Do you want these letters to go in the record?

Mr. SLOAN. I do not know whether that is advisable. I would like to have you read them, and then, if you think it advisable, to have them go in.

The CHAIRMAN. Who has made the proposition to you to return?

Mr. SLOAN. Mr. McAllaster.

The CHAIRMAN. Was he manager of the Sloan Shipyards Corporation yards when the Emergency Fleet Corporation took charge?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. And he still remains there?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Is he an experienced shipbuilder?

Mr. SLOAN. No, sir; but he is a naval architect and a mechanical engineer, aud I have been acquainted with him for 20 years, and I have built boats that Mr. McAllaster designed, and he and I have worked together during that period of time on a great deal of work.

The CHAIRMAN. He understands how they should be built?

Mr. SLOAN. He understands the theoretical part of shipbuilding.

The CHAIRMAN. An he is still in charge of the Sloan Shipyards Corporation yards?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Suppose you give us the benefit of your judgment on the two points which you have mentioned——

Senator JONES. Mr. Chairman, before you could proceed with that, in connection with what he has just testified, I certainly think this letter should go in, because it is the notification putting in charge of this work Mr. Arnold and stating the Anacortes work is merged into the Olympia work, and I think that ought to go in. And this is another letter here from Eugene L. McAllaster with reference to this transfer and I think that ought to go in, too.

Mr. SLOAN. Yes; but be certain that the plants are not merged.

Senator JONES. He says they are here.

Mr. SLOAN. He is mistaken.

The CHAIRMAN. They may not be merged physically.

Mr. SLOAN. No; nor in any other way.

Senator JONES. Probably the other Senator would be interested in having this letter read, and I think I will read it.

OLYMPIA, WASH., *December 14, 1917.*

Mr. JOSEPH A. SLOAN,
Anacortes Shipbuilding Co., Anacortes, Wash.

DEAR SIR: As the affairs of the Anacortes Shipbuilding Co. have been merged into the Sloan Shipyards Corporation, and as the duty of the management of the affairs of this corporation has been placed upon me, it becomes my duty to advise you that Mr. Lon Arnold has been placed in charge of the Anacortes Shipbuilding Co. as acting

superintendent and that your authority over the affairs of the Anacortes Shipbuilding Co. ceases with your receipt of this letter.

Kindly turn over to Mr. Arnold such matters as should be brought to his attention.

Your salary account will be vouchered as soon as possible up to December 15.

Yours, very truly,

SLOAN SHIPYARDS CORPORATION,
EUGENE L. MCALLASTER, *Acting Manager.*

(The other letters submitted by Mr. Sloan are here printed in full, as follows:)

OLYMPIA, WASH., *January 8, 1918.*

Mr. JOSEPH A. SLOAN,
552 Colman Building, Seattle, Wash.

DEAR SIR: I have your letter of December 17 relating to the transfer of the control and management of the Anacortes Shipbuilding Co. to the office of the Sloan Shipyards Corporation.

My authority for the letter I wrote you announcing this transfer was an agreement entered into between the Shipping Board's district officer and the president of the Sloan Shipyards Corporation. This was a verbal agreement made in my presence, and the inclusion of the Anacortes Shipbuilding Co. in the control agreed upon at that meeting was, I suppose, in pursuance of the agreement under which the Anacortes Shipbuilding Co. had been or was being merged with the Sloan Shipyards Corporation.

I have no written record that such a merger had been completed, but it had been stated to me by Mr. Philip Sloan, by yourself, and by Mr. Piper, of the Capital City Iron Works, that such a transfer had been made.

The technical details as to the transfer will naturally be determined by the legal advisors of the corporations interested.

Yours, very truly,

SLOAN SHIPYARDS CORPORATION,
EUGENE L. MCALLASTER,
Acting Manager.

OLYMPIA, WASH., *January 8, 1918.*

Mr. JOSEPH A. SLOAN,
552 Colman Building, Seattle, Wash.

DEAR SIR: The delay in answering your letter about the rearrangement of relations between Sloan Shipyards Corporation and Anacortes Shipbuilding Co. may seem unpardonable to you.

As a matter of fact the letter in reply to yours was written promptly, but the forwarding of it was so delayed by conditions beyond my control that I to-day rewrote it under the present date. There was no other reason for the delay.

Yours, very truly,

SLOAN SHIPYARDS CORPORATION,
EUGENE M. MCALLASTER,
Acting Manager.

OLYMPIA, WASH., *January 14, 1918.*

Mr. JOSEPH A. SLOAN,
552 Colman Building, Seattle, Wash.

DEAR SIR: We shall need more help, very soon, in several departments of the work at this yard and at Anacortes. We have one vessel ready to launch except for the tail shafts and bearings. There are 8 vessels under contract of which keels have not been laid, and there are 12 in various stages of advancement between these two extremes.

I should be glad to see you at work on this contract in some capacity, and there is nothing in the instructions I have received from the Shipping Board which would prevent me from utilizing your experience if the conditions can be made mutually satisfactory.

If it would be agreeable to you to be associated with the work in some capacity, please state as promptly as possible in what parts of the work you think you could be of service, and the conditions and rate of pay that would be satisfactory for you if placed in any one of those departments.

Yours, very truly,

SLOAN SHIPYARDS CORPORATION,
EUGENE R. MCALLASTER, *Acting Manager.*

The CHAIRMAN. How can Mr. McAllaster order you out and order somebody else in?

Mr. SLOAN. On receipt of that letter I went to Anacortes—I received that letter on Sunday morning coming into Seattle from Anacortes. Mr. McAllaster and I had been working together jointly on this program trying to aid each other in every way—and on receipt of that letter on Sunday morning I called Mr. McAllaster up and he met me at my office in the afternoon, and he stated that he was very sorry for having to take that position, and I asked him his authority and he stated that he assumed, of course, that the plants were merged, and I told him, of course, that they were not merged.

The CHAIRMAN. How much of the stock of the Anacortes Co. does the Sloan Shipyards Corporation own?

Mr. SLOAN. The Sloan Shipyards Corporation own the 700 shares, I think, I have the list.

The CHAIRMAN. Is that a majority of the stock that was actually issued first?

Mr. SLOAN. No, sir. I hold the majority of the stock that was issued.

Senator JONES. Is the par value per share, $10?

Mr. SLOAN. I went to Anacortes on the following day, and I found Mr.—no, the second day following the receipt of this letter—and Mr. Arnold was there, and he was on the point of leaving for Olympia. He told me he did not know what to do. He was an entire stranger there—a stranger on the Pacific coast, a stranger in the yards—did not know what had been ordered, what was doing; and he felt that he was going back to Olympia to get something more definite, and I told him then—I requested him to stay—why the Anacortes Shipbuilding Co. did not recognize Mr. McAllaster, still we did not want to place ourselves in the position of handicapping in any way the shipbuilding program of the Shipping Board as they saw best.

The CHAIRMAN. What do you say is the remedy there for bringing about the increased building of ships?

Mr. SLOAN. Why, the remedy, of course, can only be brought about by these lumber men and the loggers.

Senator FERNALD. Has there been any strike at those lumber camps?

Mr. SLOAN. Yes, sir; a strike in the shipyards. There was only one wooden-ship building plant in Puget Sound district that was not on strike, and that is the plant that I am connected with. In more than 35 years' shipbuilding experience I have had no strikes or labor troubles. The trouble, in my opinion, was the letting of too many contracts before there was some attempt to organize the material and the labor end of the situation in the beginning. We have the timber in the woods, but it is not being gotten out, and for some of the reasons as stated by Mr. Denman, and other reasons, of course, that the loggers have contracts with the railroad company for practically 41,000 cars, and the result is that they cut trees that would make 80 feet ship timber down to 40 feet. They can load more on cars in that way than they can if they are 80-foot timber, which necessitates the use of two cars at least. That; then, of course, there has been in the shipping program since the beginning no end of changes and amendments made in the simple proposition of build-

ing a wooden ship. From the beginning, up until the 1st of December, there have been changes and amendments all the time, one amendment superseding that of last week and the week before, and so on, all down through.

Senator FERNALD. That has caused delay as well as the strike?

Mr. SLOAN. Oh, a great deal of delay. Then, another thing is the lack of decision on the part of the inspectors in the yards. I will give you an illustration of that. All those old contracts with the Government must have the lumber inspected at the mills by the Pacific Coast Lumber Inspection Bureau, and certain tags put on each piece of timber or each carload or scow load before it went into the yard; and then it is subject to a second inspection on the part of the man representing the Shipping Board or district office of that board. For more than two months, a piece of keel wood furnished by the Caywood Lumber Co to our yard—the Caywood Lumber Co, is located 16 miles at Bellingham—this piece was 20 by 16 inches by 80 feet long, a beautiful stick, with the exception of a small, close check extending 3 inches each way diagonally across the corner of the stick and 4 feet long. My whole shipbuilding experience, of course, would not condemn that stick. I called it perfect. Correspondence at once commenced between our company and the district officers, which brought about the visit to the yard of the chief of the Pacific Coast Lumber Inspection Bureau, and he insisted, of course, that that was a splendid stick of timber, as I did. In 40 years I have never seen anything turned out better. After two months and a half-dozen or more inspectors visited that yard at different times, we were told we could use that piece of keel. You can multiply that by many things. In the fastening of the frames of the ship, the fastening plan has been changed four times, and the fastening of the frames is a very simple proposition, not so complicated as to necessitate changes three and four times. I have just brought here something that may go into the record—a copy of Circular No. 65. It is an amendment to the specifications and to the fastening plan, and a very good one I should say. This was adopted in August, and following, in October 15, comes a circular amending this in many particulars.

Senator JONES. Will you not point out briefly the amendments and what the results of that was?

Mr. SLOAN. Yes, sir.

Senator JONES. I would not understand it also myself without some explanation.

Mr. SLOAN. The first amendment here is:

1. *Planking.*—Cancel this item and follow fastenings as stated in specifications and detailed fastening plan.

I would have to have the specifications preceding this, which I did not bring. I merely brought this to show, as an illustration of letters following, and my brother has letters, probably a hundred, in line with this.

Senator JONES. Can you not state generally, without referring to particular things there, what effect this had and what delay it caused, what inconvenience or expense?

Mr. SLOAN. It is more in delaying the work; the expense is not great.

And then this amendment changes the work and brings about a condition that it is almost impossible to comply with, due to lack

of familiarity on the part of the author of these specifications with wooden shipbuilding.

The CHAIRMAN. For instance, what is it you can not comply with?

Mr. SLOAN. I can illustrate that something like this, and give you a practical illustration. We will assume this is the interior of the frame of a ship [illustrating with a sheet of paper], and it calls for edge bolting in the ceiling, and that is worked onto this frame here [indicating]. This edge bolting, of course, can not be done in the wake of the frame; it has always been customary to do it in between the frames, in the pockets; and they have to go back to the old specification again. But it is very confusing to the builders to receive all these amendments to these specifications from time to time.

The CHAIRMAN. Where do they come from, the district officer?

Mr. SLOAN. We received them from the district officer.

The CHAIRMAN. And he received them from the architect here?

Mr. SLOAN. I do not know, of course, where he received them from.

The CHAIRMAN. He is supposed to receive them from the architect here?

Mr. SLOAN. That I could not say.

The CHAIRMAN. Have you got that far with the work so that this delayed you?

Mr. SLOAN. Oh, in many cases. Of course, if the work was done in advance of the amended specifications, before these amendments were made, but in many cases it was not, and then while the work was in progress amendments would come and it would change at once and it would necessitate the ordering of new materials that the builders were not provided with, and it delayed the work in that way until these new materials could be procured to meet these amended specifications.

Senator FERNALD. Who gave these orders for these changes? Where did they come from—the Sloan Shipyard Corporation?

Mr. SLOAN. These changes here?

Senator FERNALD. Yes.

Mr. SLOAN. No, sir; this was just a copy that came from the district officer.

Senator FERNALD. Who is the district officer?

Mr. SLOAN. Capt. JOHN F. BLAIN.

Senator FERNALD. Whereabouts does he live?

Mr. SLOAN. In Seattle. He is the district officer for the Emergency Fleet Corporation there.

Senator JOHNSON. Were there any others than those two?

Mr. SLOAN. There were many others, but I just brought these.

Senator FERNALD. Mr. Sloan, you said it did not necessitate much expense. If you had gone ahead and done the work and had to do it over there would have been much expense?

Mr. SLOAN. Oh, yes.

Senator FERNALD. Had you in many instances?

Mr. SLOAN. In some cases.

Senator FERNALD. Then it did necessitate some expense?

Mr. SLOAN. I said not a great deal, but it delayed the work. There was too much red tape and obstructions in that way through what appeared to me a number of boards or architects working cross purposes with each other.

The CHAIRMAN. As a practical shipbuilder, would you say those changes were necessary?

Mr. SLOAN. Not these amendments; this was all right.

Senator FERNALD. What is that; is that the original?

Mr. SLOAN. No; this was an amendment made very early in the game by the American Bureau of Shipping, which classes the boats built for the Emergency Fleet Corporation, and it was an improvement on the original specifications, because they were gotten up very hurriedly. Then this comes and reamends these, making not for good work and not for progress.

Senator FERNALD. And you think they were not beneficial?

Mr. SLOAN. No, sir; not at all.

The CHAIRMAN. Is there anything else you want to say, Mr. Sloan?

Mr. SLOAN. I do not know. I just wanted to make plain, of course, in view of the fact that Admiral Bowles's testimony—what we got was published as a transcript of the testimony in the Portland Oregonian. When questioned he said he thought there were two keels laid at Ancortes, whereas, as a matter of fact, there were two vessels more than half in frame, two other keels laid, the fifth keel laying on the ground; and he said, when questioned by Senator Nelson, as to what the equipment was there, that there was just a few tools, whereas we have one of the most complete shipbuilding plants in this country there, and a plant that can turn out 14 wood ships in a year, provided the lumber can be readily had.

Another thing I might say is this: You asked me when I stated about the hulls being built at Anacortes and sent to Olympia, what the distance was. A week ago I was at Anacortes, and I found that from the Sloan Shipyards Corporation at Olympia there had been sent a barge load of scrap waste from the shipbuilding material accumulated at Olympia, loaded on to a scow and towed 160 miles. This is under the new management.

Senator JONES. It is an inland channel all the way from Anacortes to Olympia?

Mr. SLOAN. Yes, sir.

Senator JONES. So there would not be any more danger in the taking of a hull from Anacortes to Olympia than on the Ohio or Mississippi River?

Mr. SLOAN. No.

Senator JONES. Not nearly so much?

Mr. SLOAN. And the hull being complete in the various yards will have to be assembled in that way at some point to receive the machinery.

But what I want to show is that a barge, at a rental of $5 or $6 a day, and a tug costing $100 a day was hired and this scrap was taken to Anacortes to be burned there. That necessitated handling on the dock, bringing up to the mill, cutting in lengths for the boilers, and then rehandling it to the boilers, which in my opinion, as I went over it with the superintendent of the yard, would make this wood for the boiler plant cost about $7 per cord, and we with plenty of timber, the finest timber in the world, being cut right in the woods and hauled and delivered at the boiler for $2.85 per cord.

And when Mr. McAllaster notified me that my services were no longer wanted, because of the supposed merger of the two plants, we were putting together at that time six frames per day and lumber

was coming into the yard faster, after an all-summer effort to get the lumber coming in, and I was about to sign contracts with two different companies for four ships which would mean the lumber would pour in, all of it, within seven months, which would mean the completion of all the ships within a period of six months—that is, six ships; and no attention was paid to this contract that I had all ready for at least 15 days afterwards, and in 30 days they put in 30 frames or less than 1 per day.

Another thing, something was said about dismantling the plant. That would be the greatest pity in the world. There is a plant, as I stated, capable of building from 12 to 14 ships in one year, with an investment now of over $300,000, possibly $325,000 in tools, machinery, land, and in ships and shipbuilding materials on hand. It would mean a dead loss of at least $300,000, and it would delay certainly the shipbuilding program of the Sloan Shipyards Corporation. Of course, they have a firm in Olympia. The yard was laid out by me for only eight ships, and they must launch some of those ships before they can let others on. They gave up that plant at the time this plan was recommended by Blain. Admiral Bowles stated in his testimony, as I read it, that the administration officer had recommended the dismantling of this plant, and Mr. Blain had never seen that plant and had never visited that plant up to a week ago, and Mr. McAllaster had not visited it up to a week ago. Mr. Arnold received a telegram from Olympia last week to discontinue work on the two keels—that is, five and six—and stated we were only to build four ships. The building of only four ships there would mean a loss. The plant has been equipped to build more than four ships—to build 12 ships, if necessary, in a year. We have a splendid electric lighting and power plant there, and the operation of 12 ships as to overhead is not any greater on 12 ships in that plant than it would be on four.

Senator JONES. Who sent those orders, do you know, not to build the two ships?

Mr. SLOAN. It has been rumored around it was Mr. McAllaster, but I think Mr. McAllaster is acting under Capt. Blain's orders.

Senator JONES. Do you know, as a matter of fact, that such orders have been sent; that is, that ships five and six, I think you called them, were to be stopped?

Mr. SLOAN. I know that Mr. Cartwright, one of the directors of the Bank of Commerce, called me up and stated that Arnold had received such orders, and that Mr. Arnold himself was then working with the chamber of commerce to urge that that be not done, but that the yard be used to capacity. Arnold was then working with the chamber of commerce, and he was a stranger there on the 15th day of December, but he felt it would be such a pity not to use that yard to its capacity, in view of the fact that after all summer's work, starting in a raw forest, and due to strikes in the woods and in the mills we have had such trouble to get lumber, and the materials, tools, and equipment so very hard to get all ready to swing off a splendid organization, it would be a pity to stop or delay the work.

The CHAIRMAN. In your judgment, was there any good reason for building up the yard at Anacortes instead of enlarging the yard at Olympia?

Mr. SLOAN. Yes, sir; and I will tell you why. I will begin with Mr. Brent's trip in April to the Pacific coast.

Senator JONES. He was then a member of the Shipping Board?

Mr. SLOAN. Yes, sir; and at that time vice chairman of the Shipping Board. Mr. Brent's visit to the Pacific coast was in a way a mistake, in my opinion, for the reason that the time was too short. Previous to his coming there I wrote him a letter putting matters forth, and if there is no objection I will just read the letter, which was written to Mr. Brent before he arrived in Seattle, and I wrote it care of Hotel Washington, where I was told by a wire from the Shipping Board here in Washington that he would be pleased to meet me:

SEATTLE, WASH., *April 3, 1917.*

Hon. THEODORE BRENT,
Care Hotel Washington, Seattle, Wash.

DEAR SIR: I know that your stay in this city will be very much taken up by prearranged plans of the chamber of commerce, aided by public-spirited citizens.

I also realize that in a public hearing where the time is limited much of the very essence of the project that has necessitated your visit to the Northwest may not be brought out sufficiently.

It is because of an earnest desire to render a real public service that I address you in the above manner, as I believe that my 35 years' experience in wood shipbuilding on the Great Lakes and the Atlantic and Pacific coasts has placed me in possession of as much detailed knowledge on this subject as any man in this country. Therefore I shall be pleased to place myself at your service any time during your visit in this locality.

Respectfully, yours,

J. A. SLOAN.

Mr. Brent, at his first meeting there in the Chamber of Commerce Building, stated, and he created the impression there, that it was the desire of the Shipping Board to get out a large number of wood ships. He came there principally to learn approximately how many wood ships could be turned out within a year and two years, and he stated, if I remember rightly, that it was the intention of the Shipping Board to aid the shipbuilder. I attended a meeting there in the Chamber of Commerce Building in which there were probably 300 people. Not more than six of them had any wood shipbuilding experience before, and for the reason that wood shipbuilding was almost obsolete, and that is what I had in view when I wrote him that letter.

Here were merchants of different kinds, foundry men, boiler makers, and machinemen, etc., all talking about wooden shipbuilding program. Of course, they stated there, as they did in Portland and other cities, that they could turn out hundreds of those wooden ships. They thought they could, too; but I felt they could not; and I am on record before the board as stating this thing, that if the Shipping Board was prepared to give every assistance possible to the wooden-ship builders there—I mean financial assistance, because the wooden-ship builders of the Pacific coast had no means, no capital at all, only small plants—there are larger plants now—to aid them in getting the materials necessary and the labor, if necessary, and aiding the plants already established, and with the establishment of new plants at points like Raymond, where Sanderson & Porter have now gone in, where there was no shipyard located, and where there were a half dozen sawmills, a splendid country. I had gone down there and covered the situation and found probably 500 or 600 men—carpenters and some who had worked at ships—could be supplied; and in Anacortes and in different towns where no yards

were established, that it would be possible, in my opinion, to turn out 50 or 60 ships of not more than 200,000 tons. But with all that assistance and that slow organization of building up the plants, organizing the lumbermen, etc., in the second year we could build four times that many. And then we could, in my opinion—because I know something about the yellow-pine conditions in the South and have used their timber—build practically 65 to 75 per cent of all the wood ships in all the Northwest. And the mistake was made, as I said before, in letting of contracts too fast, and Mr. Brent got everybody excited, with the result, first, that everybody wanted to go into the shipbuilding business.

The CHAIRMAN. When was he there?

Mr. SLOAN. In April. In Olympia, the yard, as my brother might possibly state, is on piles driven out in salt water, and on leased ground, a splendid yard, one of the finest in America, all docks clean just like this floor; and to extend that for any more than eight ships would be inadvisable, for the reason that it is exceedingly costly, and since there were so many yards drawing on all these mills that it was not good policy.

Senator JONES. What are the special advantages of the location at Anacortes?

Mr. SLOAN. The special advantages at Anacortes are, of course, that we own the ground, have very low taxes. Then it has this natural advantage, that the ground is sloping naturally, practically the pitch on which ships are launched, and the keels of all the ships are laid below the working level of the ground similar to this [illustrating], where in all the yards where it is level or otherwise they are laid above ground. With us everything is going down to the ships, for it is down in the water; the yard surrounds it. It is graded so that the yard surrounds the ship and the ship is down in a pit, making it economical to get the materials down, whereas, when the ship stands with the keel blocks up 14 or 16 feet, everything is going up. We have a good supply of lumber, with many mills surrounding us, and, if necessary, with British Columbia right next door to us there, if we could not get lumber in the American mills——

Senator JONES. An ample labor supply for the size of the yards?

Mr. SLOAN. Yes; there would not be a labor supply for 12 ships, but there is for 6 ships. I have canvassed that very carefully before we went in there.

Senator JONES. And you have an ample depth in the harbor?

Mr. SLOAN. The finest water in the world. They could build the largest battleships and launch them there.

Senator JONES. I know that is true myself; I know these natural surroundings have been described by you correctly.

Mr. SLOAN. There is cheap firewood and cheap shoring wood to shore the vessels up, trees, etc. We have many advantages of that kind, and an ample labor market for not to exceed six ships.

Senator JONES. What about the overturn of labor in your shipyards—is your labor changing very much?

Mr. SLOAN. No.

Senator JONES. That is, there are not other manufacturers around there close to take them away from you?

Mr. SLOAN. You know in Olympia City——

Senator JONES. Yes.

Mr. SLOAN. In Gray's Harbor, Seattle, Tacoma—the labor is changing there all the time, and you know how the mills are located as to the timber situation and the mill situation. Within 60 miles of Olympia, where there are many mills, there are 10 or 15 or 20 wooden-ship yards taking this lumber, where at Anacortes the Anacortes Shipbuilding Yard and the Pacific American Fisheries at Bellingham are the only two yards within 100 miles.

Senator JONES. That was the situation I wanted to bring out, because it struck me you had a very great advantage in that way.

Mr. SLOAN. Yes, sir.

The CHAIRMAN. When was this Olympia yard built?

Mr. SLOAN. We started in there one year ago this month.

Senator FERNALD. At Olympia?

Mr. SLOAN. Yes.

The CHAIRMAN. You better concentrate it on Anacortes, had you not?

Mr. SLOAN. At Anacortes—you understand I had opened an office. In addition to being a practical shipbuilder, I am a designer of wooden ships, and there are some 25 or 30 wooden ships now building off my plans on the coast, and I was doing an office buisness, as a consulting shipbuilder, and I laid out quite a number of yards—the Meacham & Babcock yard, and this yard, one down at Fostoria; and previous to that I planned ships for the Puget Ship & Dredging Co. or the Washington Shipping Corporation, which is now building its twelfth ship off of my plans; and I went in as superintendent of their yard and was superintendent of their yard until one year ago the first day of this month; and then I wanted to sever my connection with the practical shipbuilding end, as it was pretty hard taking raw men and educating them. You had to show them how to handle tools, run shears, the practical part of it; and there was a splendid opportunity to open up an office, and I had a business which netted me $15,000 to $20,000 a year. For instance, Mr. Stephen Taylor, the president of the American Bureau of Shipping, when he was in Seattle in April, commissioned me to get out plans and specifications for a revision of the standard of classification for American ships built of wood. The Government shipbuilding program had not been started, and when the Sloan Shipyards Corporation received these contracts more than anything else it was with a desire to help that I entered into the game, and I sacrificed that. It was not for the money in it for me, it was a desire to take part in a big program that I knew thoroughly.

Senator JONES. How many men do you employ in your shipyard or should you employ in the construction of six ships as rapidly as they should be carried on?

Mr. SLOAN. I should say about 500 or 600 men.

Senator JONES. Where do you get most of them—do a great many of them live there at Anacortes?

Mr. SLOAN. Why, yes; right around Anacortes, and I have 150 letters from others living all around in that country and over at Port Angeles. You see, I have been building there for more than 20 years in the sound, and men know me all over. Some of them have gone into the interior, to Idaho and Montana, and I have received letters since this shipbuilding boom started asking for work—from Mount Vernon and Everett—there is no shipbuilding at Everett; and there

are many who live at North Seattle who have their families at Anacortes who would be glad to come up there to work and men working at Grays Harbor who want to work at home.

Senator JONES. As I understand it, when you were notified to get out, you had done this so that your yard would proceed very rapidly; you had made all the necessary arrangements to insure you an ample supply of lumber and you had your organization in good shape?

Mr. SLOAN. Yes, sir; that is true, and I would like to impress on this committee, if that is possible, that I know something about the wood shipbuilding business and am accredited throughout the Northwest with knowing that.

The CHAIRMAN. I believe that is all, Mr. Sloan.

Mr. SLOAN. Thank you.

The CHAIRMAN. The committee will now stand adjourned until 2 o'clock to-morrow.

(Thereupon, at 4.40 o'clock p. m., the committee stood adjourned to meet to-morrow, Thursday, January 24, 1918, at 2 o'clock p. m.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

THURSDAY JANUARY 24, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met pursuant to adjournment at 2 o'clock p. m., Hon. Duncan U. Fletcher presiding.

Present: Senators Fletcher (chairman), Nelson, Jones, Sherman, and Calder.

Senator JONES. Mr. Chairman, Mr. B. R. Lewis, of Seattle, Wash., one of our principal lumbermen, is here, and he has to leave the city this afternoon, and I would like for him to be heard now.

The CHAIRMAN. We will hear Mr. Lewis now. Senator Jones, will you examine him?

STATEMENT OF MR. B. R. LEWIS, LUMBER OPERATOR, SEATTLE, WASH.

Senator JONES. Where do you reside, Mr. Lewis?

Mr. LEWIS. Seattle, Wash.

Senator JONES. What is your business?

Mr. LEWIS. Lumber business.

Senator JONES. What is the character of the business—logging or manufacturing lumber or what?

Mr. LEWIS. Both. We log our own timber.

Senator JONES. What is the extent of your business?

Mr. LEWIS. Our logging capacity is about 125,000,000 feet a year.

Senator JONES. Where is it principally located?

Mr. LEWIS. Skagit County, Wash.

Senator JONES. What can you say as to the possibility of supplying the demands of the Government for lumber on the Pacific coast? Please state fully.

Mr. LEWIS. Well, the demands or orders so far have been very promptly filled, with the exception of the aeroplane stock, and the orders for that did not come in until September, and as the spruce is a very small percentage of the timber growing, and it only occurs in three localities in Washington——

Senator JONES (Interposing). Is your company especially interested in the shipbuilding timber?

Mr. LEWIS. Yes, sir.

Senator JONES. What have you done in that respect?

Mr. LEWIS. Well, the orders have all been filled very promptly. The last order of 50,000,000 feet, about half of it, or a little more, has been filled, and they got those orders, I think it was, the latter part of November, and during that time we have been bothered with

the floods and the Christmas shutdown, which we have every year in the woods.

Senator JONES. Is that 50,000,000-feet order that you referred to the order for the lumber to be sent to the East?

Mr. LEWIS. Yes, sir; the other for the local yards—the orders have been very promptly filled for that.

Senator JONES. When did you say you received the order for this lumber to be shipped to the East—this big ship timber?

Mr. LEWIS. It was in November; I think it was the latter part of November.

Senator JONES. The latter part of November?

Mr. LEWIS. I think it was the latter part of November. I know it was in November.

Senator JONES. Had you had any notification before that that you were going to get that order?

Mr. LEWIS. We had not. We were notified only a few days before receiving the order.

Senator JONES. And it was under that order that the 25,000,000 feet that Mr. Piez referred to before this committee a few days ago as being on the way east was shipped, was it?

Mr. LEWIS. Yes, sir.

Senator JONES. And is the other part of that order being rapidly filled?

Mr. LEWIS. Yes, it is being rapidly filled; as rapidly as it is possible to do so. There is no delay.

Senator JONES. Was any suggestion made by the representatives of the lumber interests to the Shipping Board, or any of their representatives, as to the needs for big timber?

Mr. LEWIS. I do not quite understand that question.

Senator JONES. Did any representative of the lumber interests of the Pacific coast suggest to any representative of the Shipping Board quite a while ago that they would need a lot of large timber and that steps ought to be taken to get it out?

Mr. LEWIS. Well, the lumber men have tried to get the specifications for these timbers ahead, as it takes a little time, and we have to antitcipate those wants in order to get the proper timber felled in the right lengths to supply those orders.

Senator JONES. Please state, if you know, just what the lumber people did in that respect.

Mr. LEWIS. Well, the Fir Production Committee has endeavored to get those specifications as far ahead as possible, so that they could give them to the loggers and the mills, to get them out.

Senator JONES. When did you first make demands to get that done?

Mr. LEWIS. Well, I can not give you the exact dates.

Senator JONES. Well, about when?

Mr. LEWIS. I know that ever since this program has started we have been working on that matter, trying to get those specifications s soon as possible, so we could get them out promptly.

Senator JONES. Well, have any delays resulted from the failure to et those specifications?

Mr. LEWIS. Yes, there has been more or less delay. Mr. Palmer, our representative here, could give you the exact dates and the details of that.

Senator JONES. He knows about that, does he?

Mr. LEWIS. Yes, he knows those dates better than I do.

Senator JONES. Mr. Lewis, from your knowledge of the lumber conditions out there and the facilities for getting out timber, what do you think of the probability of your being able to supply all the demands the Government is likely to make, either for the present contracts or for contracts that it might let to existing yards for the building of ships?

Mr. LEWIS. Well, Oregon and Washington will produce about 3,000,000,000 feet of lumber a year.

Senator JONES. How many billion did you say?

Mr. LEWIS. About three billions. And 15 per cent of that would be suitable for shipbuilding purposes; that is, select common; about 5 per cent suitable for aeroplane stock; and about 50 per cent common; that is, in the dimensions of common timbers; and about 30 30 per cent side lumber, such as drop siding and finish and ceilings. It is that that will have to be taken care of and used in some other way, either by the dealers or the cantonments; it is necessary to get rid of that side lumber in order to produce the shipbuilding timber. A good many of the mills have not the yard room and have not the capital to carry the side lumber.

Senator JONES. What effect would the adoption of a clear, definite, and consistent policy with reference to wooden shipbuilding have upon the development of lumber plants and facilities?

Mr. LEWIS. It is the only way that they can get it out promptly; that is, to know a little in advance what the requirements of the Government or any industry are going to be.

Senator JONES. And if it was known that there would be a consistent policy of wooden shipbuilding and that contracts would be let for wooden ships to the capacity of the yards in getting out shipbuilding timber, would that have an influence in leading the owners of the present plants to extend their facilities?

Mr. LEWIS. It would.

Senator JONES (continuing). And harvest more timber?

Mr. LEWIS. It would.

Senator JONES. They would make greater investments of their own, would they?

Mr. LEWIS. Yes; they would make investments, and they would prepare to take care of that particular requirement.

Senator JONES. So that the uncertain and indefinite policy that has been pursued with reference to wooden shipbuilding has largely prevented such development, I take it?

Mr. LEWIS. It has. For instance, in our own case, in addition to what we manufacture, we sell about 50,000,000 feet of logs on the open market; and the early part of last year we put in a considerable amount of logs, the long logs suitable for shipbuilding purposes; and we did not get any demand for that, and consequently we could not carry that indefinitely in the salt water, as it would eat the trees up. About 90 days is the longest that we can carry those logs in the salt water; they ought not to be there more than 40 or 50 days.

And we had to force some of those long logs on the market and cut them up. And later, when those requirements of the Shipping Board were made known to us, we immediately commenced to get the longer logs again to meet the requirements of the shipping industry.

But it takes from 60 to 90 days to get it out. Well, you have got a bucked fall of timber; you have to build a railroad into it and you should have from 60 to 90 days before you can put your logs in the water. You ought to have logs enough ahead to last you that long. That is, according to our method of logging out there.

The CHAIRMAN. How far do you have to go to get your timber, Mr. Lewis?

Mr. LEWIS. Well, we have a main line and we have branches; we have 56 miles of railroad in our operations.

The CHAIRMAN. Will you need to build more than that?

Mr LEWIS. Well, those branches of course we would have to extend; we now use 56 track miles of steel in our business.

The CHAIRMAN. How far do you have to take your timber?

Mr. LEWIS. Well, we put the logs in the Skagit River, at the head of navigation, and then we have to tow them down to Skagit Bay, where the salt-water tugs can get hold of them. I suppose it is 20 miles; a tow of about a day and a half.

Senator NELSON. Where do you saw the lumber?

Mr. LEWIS. Well, we manufacture about 75,000,000 feet. Our mills are at Clear Lake; but those 50,000,000 feet we handled on the open market.

Senator NELSON. Where are they handled?

Mr. LEWIS. They are sold on the open market to the mills on the sound.

The CHAIRMAN. You take the logs down to the bay?

Mr. LEWIS. Yes, sir.

The CHAIRMAN. And then the mills buy them and take them to wherever the mills are located?

Mr. LEWIS. Yes, sir.

The CHAIRMAN. Are they convenient to the mills when they are in the bay?

Mr. LEWIS. Well, we sell our logs principally in Seattle and Everett.

The CHAIRMAN. How far is that from where they get the ocean tugs?

Mr. LEWIS. Well, that is from 40 to 70 miles.

Senator NELSON. From Skagit Bay to Everett is 40 miles, is it?

Mr. LEWIS. About 40 miles.

Senator NELSON. And it is 30 miles further to Seattle; is that the way you figure it?

Mr. LEWIS. Yes, sir—about.

The CHAIRMAN. Have you any difficulty in getting the right sizes there?

Mr. LEWIS. Well, if we know in advance the requirements, we do not have much trouble; we have the logs of the proper length for them then.

The CHAIRMAN. The timber does not run regularly to those sizes; they are the big trees that you have to pick out?

Mr. LEWIS. Yes, sir.

The CHAIRMAN. About how many of those big trees to the acre would there be?

Mr. LEWIS. The timber now runs about 85,000 feet to the acre; some of those trees run 15,000 to 18,000 in a tree; we have got some small timber too.

The CHAIRMAN. You have 85,000 feet to the acre, have you?

Mr. LEWIS. About 85,000 feet to the acre; that is the average.

The CHAIRMAN. That is 85,000 feet altogether, then. Well, you have not yet told us about how many trees of those large sizes you would estimate to the acre.

Mr. LEWIS. Well, it varies; in some localities, you know, the timber is pretty small; then again we have spots where the timber is large; old growth—what we call old-growth saplings make the best timber we have for that purpose. Now, I could not tell you the number of trees on the acre; it would be pretty hard to say that; it has been quite a while since I estimated timber.

The CHAIRMAN. Have you any idea about how many acres of timber there are out there that would be available for shipbuilding?

Mr. LEWIS. Oh, that is a pretty big problem. Those figures have been compiled, but I have not the figures in my head. There is quite a lot of timber out there. Of course, the handy timber is pretty well gotten out now. We are now logging 3,000 feet above the level of the sea; that is, two of our camps. They have to go up there with switchbacks, and have to use 100-ton Shaw locomotives. It is hard work to get that timber now.

The CHAIRMAN. You haul the logs down on the cars, do you?

Mr. LEWIS. Yes, sir. To get that last timber, we have seven locomotives—100-ton locomotives.

The CHAIRMAN. Do you have any trouble now about your labor in the camps?

Mr. LEWIS. We have never had any trouble with labor. We run 100 per cent full all summer. Col. Disk has that pretty well in charge; he has charge of the spruce production department, and we have been trying to get him put in charge of all production. He has confidence in the lumber men, and he has put soldiers in the camps, and is wiping out the I. W. Ws. He has that situation entirely in charge; and with his efforts—and if the Secretary of War and the Secretary of Labor will leave us alone and not interfere with our labor—we will have no trouble.

Senator CALDER. What do you mean by that: "If the Secretary of War and the Secretary of Labor will leave you alone, you will have no trouble?"

Mr. LEWIS. Well, the telegram that he sent us, in wanting to put the work on an 8-hour day; naturally it excites the men; and if they think they have got the support of the Secretary of Labor and the Secretary of War——

Senator CALDER (interposing). And the attitude of the Secretary of Labor and the Secretary of War was favorable to the 8-hour day, was it?

Mr. LEWIS. Evidently, from the telegrams they have sent us.

Senator CALDER. And you would have no trouble with your labor except for that?

Mr. LEWIS. Well, the I. W. W.'s give us some trouble. They give our company no trouble; we ran 100 per cent full last summer. But there was a strike out there, and we would have had a settlement of it sooner, if they had let us alone.

Now, Col. Disk is taking that in charge, and is putting soldiers in there, and everything is running along nicely now.

Senator CALDER. In other words, you could work out your own labor problems if you were left alone?

Mr. LEWIS. That is the way we feel about it.

Senator CALDER. And get along all right?

Mr. LEWIS. Yes, sir; if outsiders will let us alone, we will have no trouble.

The CHAIRMAN. How many hours a day do you have now?

Mr. LEWIS. Ten hours.

The CHAIRMAN. And what do you pay them?

Mr. LEWIS. Our wages for the last month have been about $4.93 a day.

The CHAIRMAN. Does that include board, or do they have to pay their board?

Mr. LEWIS. No, they pay their board; about $6.50 a week. Skinner & Eddy's shipyard paid the highest wages out there; and Mr. Eddy told me the other day that their average wage was $4.51 a day.

Senator NELSON. You say yours is $4.90?

Mr. LEWIS. No; $4.93.

The CHAIRMAN. Some of them pay more and some less, I suppose?

Mr. LEWIS. Yes; the lowest wages that we pay are $3.50 a day.

Senator JONES. And what is the highest?

Mr. LEWIS. Well, I think it is $8 a day.

Senator CALDER. Who gets $8 a day?

Mr. LEWIS. Well, the hook tenders, the loaders, and the head riggers.

The CHAIRMAN. And the locomotive engineers?

Mr. LEWIS. No; the locomotive engineers do not get as much wages as the head riggers and the loaders; they are the principal men that get the high wages.

Senator CALDER. Are they skilled men?

Mr. LEWIS. No; not exactly; they have got to be loyal men, and energetic men. It does not take very much experience to make that kind of men, if they have got the energy.

Senator CALDER. And they are a good type of men?

Mr. LEWIS. They are a good type of men.

Senator CALDER. And they work regularly, do they?

Mr. LEWIS. Well, that is one of the qualifications that are required of them.

Senator CALDER. Well, they do work regularly; they do work six days a week?

Mr. LEWIS. They have got to; they are the leaders of those crews; and the hook tenders are subforemen; a hook tender has 14 men in his crew.

Senator NELSON. Have you had any trouble about getting plenty of men for logging?

Mr. LEWIS. Well, our company has not; but there has been some trouble out there during that I. W. W. disturbance.

Senator NELSON. There have been strikes out there?

Mr. LEWIS, Yes, sir.

Senator NELSON. But you had no strikes in your plant?

Mr. LEWIS. No, sir.

Senator NELSON. Were all of your men union men?

Mr. LEWIS. There was not one union man; if there had been we would have had trouble.

Senator NELSON. You would have had trouble if they had been union men?

Mr. LEWIS. Yes, sir.

Senator NELSON. And none of your men are union men?

Mr. LEWIS. Not at this time; we have had them, but we have no union men at this time.

Senator NELSON. There have been strikes out there in some of the localities, have there not?

Mr. LEWIS. Yes. I think 10 per cent of the men give us all the trouble.

Senator NELSON. And they were the I. W. W.'s?

Mr. LEWIS. They were the vicious element. And we feel out there that it was brought on by the German agents; that it was pro-German.

Senator NELSON. Yes; they were disloyal at heart.

Mr. LEWIS. It was something different from anything I ever saw before; it was revolutionary; it was the result of that propaganda.

Senator NELSON. And it was accompanied by sabotage, was it?

Mr. LEWIS. You have got it exactly. That was the propaganda that we had to go up against.

Senator NELSON. Yes.

Mr. LEWIS. And in our place we did not have a fire; but we had no trouble; we had less trouble last year than we ever had; but it was because——

Senator NELSON (Interposing). How many men do you employ?

Mr. LEWIS. About a thousand. And I attributed our good fortune to the fact that in our organization, we felt that this was coming on, and we cleaned out all that element.

Senator NELSON. How was it in the sawmills in the southern part of the State?

Mr. LEWIS. Well, it was the same way; it was worse in the spruce country. We had the fir running before they got the spruce running; it was much worse there.

Senator NELSON. I understood from the newspapers that there was a strike among those who were getting out timber for aeroplanes; that is true, is it?

Mr. LEWIS. Yes; it was worse there. Now, on Willapa Harbor, we had quite an effort there to get those mills started. They even went so far there as to start fires into the spruce timber, where it was bucked and felled, to destroy it; and there were instances where nice, big, clear spruce was deliberately felled among stumps, to break them up. There was such work as that. I feel confident that the work was all started by pro-German influence.

Senator NELSON. That is, to prevent the manufacture of aeroplanes?

Mr. LEWIS. Yes, sir. But Col. Disk has made wonderful progress.

Mr. NELSON. How?

Mr. LEWIS. He is in charge of the spruce construction department, and we have tried to get him put in charge of all of the production.

Senator NELSON. He is a Government man, is he?

Mr. LEWIS. Yes, sir.

Senator NELSON. He is a good man, is he?

Mr. LEWIS. He is a very good man.

Senator NELSON. They are getting the spruce timber now are they?

Mr. LEWIS. He is going to get results.

Senator NELSON. Where are they sawing, mostly?

Mr. LEWIS. On Willapa Harbor and Grays Harbor.

Senator NELSON. That is out on the Pacific coast, is it not?

Mr. LEWIS. Yes. Then in the coast part of Oregon they produce it; and then there is what is called the Olympic Peninsula. They have only one sawmill there, but the lumber men tow it to Seattle and saw it there.

In Washington there are those three sections—the Olympic Peninsula and the Grays Harbor and Willapa Harbor are the three producing sections. Of course, we have a little spruce, too, but it is insignificant compared with theirs.

Senator NELSON. It is that country west of Port Townsend, is it not?

Mr. LEWIS. Yes, sir.

Senator JONES. With reference to your suggestion regarding Col. Disk, I understood you to say that you think it would be best for Col. Disk to have charge of all the lumber operations of the Government out there?

Mr. LEWIS. We have so recommended, and it was unanimous.

Senator JONES. That is, you think if Col. Disk were put in charge of the aeroplane lumber demands and the Army demands and the Shipping Board's demands, you would get far better results?

Mr. LEWIS. There is no question about that.

Senator JONES. Why?

Mr. LEWIS. In the first place he is a practical business man and he has the absolute confidence of the lumbermen and he has gone about it practically, and he is not monkeying with the labor conditions. And then he started several movements out there that have helped. There is, for example, the Loyal Legion of Loggers and Lumbermen. He started that among the loggers; it is a patriotic organization, and he is raising 18,000 men; he is taking the loggers out of the enlistment in the cantonments and he is enlisting them in the Signal Service.

Senator JONES. Is this also true, that in getting out those big ship timbers you could also get out a lot of timber suitable for aeroplane work and also a lot of timber suitable for Army work and a lot of timber suitable for other purposes?

Mr. LEWIS. Yes, sir.

Senator JONES. And if one man were in charge of it all he could coordinate the work?

Mr. LEWIS. There would not be any lost motion.

Senator JONES (continuing). So as to get out the different kinds of lumber without loss?

Mr. LEWIS. Without lost effort.

Senator JONES. And that would expedite the whole program?

Mr. LEWIS. Of course, the Shipping Board come around and pound us for ship timbers, and the aeroplane man comes around and pounds us for aeroplane stock, and of course we want to do everything we can to help the program along, but sometimes a man does not know which master to serve first. Now, to show the breadth of Col. Disk,

there are camps where he does not get any aeroplane stock, but he has put soldiers in them to allow them to produce fir for shipbuilding, although he has not got charge of that department.

Senator NELSON. He is taking soldiers, then, temporarily, from the military camps into the lumber woods to get out lumber?

Mr. LEWIS. Yes, he takes them to Vancouver, Wash., and they are mobilized there; and then he sends them to the lumber camps that are short of men—and where the I. W. W. element is the worst.

Senator NELSON. That does not permanently remove those men from the military service, does it? It is only temporary, is it not?

Mr. LEWIS. Well, I understand that this organization he has gotten up is to——

Senator NELSON (interposing). Of course, it is a military organization?

Mr. LEWIS. Oh, yes; they are to keep those soldiers there as long as the Government needs them to get out spruce and fir for aeroplanes.

Senator NELSON. They are "lumber soldiers," are they?

Mr. LEWIS. Yes, sir; but he has picked lumbermen; he has taken the lumbermen out of the Army.

Senator NELSON. They get the Army pay, do they?

Mr. LEWIS. No, they get the civilian pay.

Senator NELSON. They get the civilian pay?

Mr. LEWIS. Yes. But they have every provision made for them; there is a doctor sent out with them, and so on. And they give very good satisfaction. I have not known of a case where there is friction in the management of a camp. It seems as though the men he has selected are very good men.

Senator NELSON. Those men do not strike, do they?

Mr. LEWIS. No, sir.

Senator JONES. Mr. Chairman, in connection with the lumber situation on the Pacific coast, I have two short newspaper clippings here, from the Seattle Post-Intelligencer, of Saturday, January 12, 1918.

One of them is a statement from B. R. Lakin, of the Traffic Department of the American International Shipbuilding Corporation, of Philadelphia, showing how promptly an order for 100,000,000 feet of lumber has been filled out there; and the other is a statement showing the effort that the loggers are making to hurry the work of getting out the timber in the State of Washington.

(The newspaper articles referred to are here printed in full as follows:)

WASHINGTON FIR IS GAINING FAME—OFFICIAL OF EASTERN CORPORATION BOOSTS TIMBER AND RAPIDITY OF HANDLING.

[From the Seattle Post-Intelligencer, Jan. 12, 1918.]

B. R. Lakin, of the traffic department of the American International Shipbuilding Corporation, of Philadelphia, is a guest of the Rainier-Grand Hotel, and will be in the Northwest from 60 to 90 days facilitating the shipment of lumber from the mills of this State to the great plant of his company, which is located on Hog Island, in the Delaware River, 7 miles below Philadelphia.

"Already," said Mr. Lakin last night, "we have more than 100,000,000 feet of fir lumber cut and loaded at your mills now on the way east. It has been gratifying to us to have suffered no delays at the hands of your millmen or railroads. Indeed, I feel like complimenting both lumbermen and transportation men on the facility

with which our immense purchases are being handled and transported. I can see that we will suffer no loss of time because of a lack of initiative and enterprise on the part of you people out here.

FIR BECOMES FAMOUS.

"Sixty days ago lumber now on the way East was still standing in your wonderful forests. That, to my mind, is splendid evidence of the spirit with which you do things. Washington fir is getting good advertising. Only a short time ago we knew nothing of it, and now everybody wants it. It is certain to play a large part in the shipbuilding industry of the present and the future."

LOGGERS SEEK PLANS FOR HURRYING WORK.

[From Seattle Post-Intelligencer, Jan. 12, 1918.]

On the theory that "logless days mean shipless ways" the logging industry of the Pacific Northwest has commandeered itself, naming George Long, of Tacoma, dictator in all matters pertaining to ship log production.

During the present war emergency this is the first time that a basic industry has patriotically decided to commandeer itself in order to speed up essential war material.

The business of self-imposed commandeering occurred unanimously at a big meeting of loggers in all-day session Friday at the New Washington Hotel. The meeting was held under the auspices of the West Coast Lumber Emergency Bureau, the war service department of the West Coast Lumbermen's Association.

Long logs suitable for shipbuilding purposes are now being produced in sufficient quantity to take care of the original Pacific Northwest shipbuilding program, but not in sufficient quantity to take care of the new program of the United States Shipping Board Emergency Fleet Corporation, which is likely to greatly increase wooden ship construction here in the near future.

In addition to possibly bringing about a short log supply the prospective heavily increased volume of log production was looked upon as having a tendency to skyrocket log values. The industry generally regards such a tendency with some alarm, in view of the fact that the Government has already fixed the price of lumber, which price fixing, it was held, might result disastrously to efficient mill operations working uncontrolled raw material.

The meeting went on record as favoring Pacific coast ship construction in Gulf coast sizes of ship timber. The timber sizes for ships to be built on the Gulf coast and Atlantic coast are smaller than the sizes prescribed for Pacific coast construction, notwithstanding that the Pacific coast is furnishing lumber in southern pine sizes for southern and eastern shipyards. The meeting took the stand that if these smaller sizes were acceptable for the shipbuilding industry on other coasts they also should apply on the Pacific coast, especially in view of the fact that the modified schedule of sizes would result in the production of about 40 per cent more ship lumber than is possible under the Pacific coast specifications.

In his position as dictator for the industry, Mr. Long, it is said, will have the assistance of committees in the several producing districts.

STATEMENT OF MR. PHILIP D. SLOAN, PRESIDENT SLOAN SHIPYARDS CORPORATION, SEATTLE, WASH.

The CHAIRMAN. Mr. Sloan, will you state your name, your age, and place of residence?

Mr. SLOAN. Philip D. Sloan; 51 years of age; residence, Seattle, Wash.

The CHAIRMAN. How long have you lived in Seattle?

Mr. SLOAN. I went to Seattle 11 years ago.

The CHAIRMAN. Where did you live before that?

Mr. SLOAN. Cleveland, Ohio, Chicago, Ill., and Bay City, Mich.

The CHAIRMAN. What has been your business experience, Mr. Sloan?

Mr. SLOAN. I went into the shipyard with my father and my brother when I was quite young, and was with them until I became a master builder, when I was 22 years of age.

Senator NELSON. And that was at Cleveland, Ohio?

Mr. SLOAN. At Cleveland, Bay City, Mich., and Toledo, Ohio. I was with the Wheeler Shipbuilding Co. and the Davidson Shipbuilding Co., and the Craig Shipbuilding Co., of Toledo, and the Quayle & Sons Shipyard in Cleveland.

Now, that was all wooden work; no steel.

And then I became a salesman for building material. And I went to Seattle 11 years ago and joined my brother, and my home has been in Seattle since that time.

The CHAIRMAN. You have been engaged in building ships there on the Pacific coast, have you?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. At what places?

Mr. SLOAN. At Seattle.

The CHAIRMAN. Were you with your brother in the various building operations that he has testified about before this committee?

Mr. SLOAN. Yes, sir; we were together, and I had some work alone.

The CHAIRMAN. What sized ships?

Mr. SLOAN. The largest boat I built in Seattle was a car float, for the Great Northern Railway to carry cars from New Westminster to Port Sydney, Vancouver Island.

The CHAIRMAN. What tonnage?

Mr. SLOAN. That was 174 feet long. That was the largest I ever built in Seattle. I subcontracted for work—the largest wooden boat was 317 feet long. That was in Capt. James Davidson's yard, in West Bay City, Mich. I did that when I was 22 years old.

Senator NELSON. Were those ferryboats, boats that you built in Seattle?

Mr. SLOAN. It was a float, the same as they have on Lake Michigan.

Senator NELSON. A boat that you run the cars on to take them across the water?

Mr. SLOAN. Yes.

Senator NELSON. The same as they have on Lake Michigan?

Mr. SLOAN. Well, they have some of that kind that run out of Chicago up to Muskegon.

The CHAIRMAN. When did you form the Sloan Shipyards Corporation?

Mr. SLOAN. The Sloan Shipyards Corporation is the new name of the Seattle Dry Dock Co. I organized the Seattle Dry Dock Co., I think it was on the 14th of March, 1911, and the Sloan Shipyards Corporation was simply a new name for that. That was changed last March at the suggestion of one or two associates, and some friends in New York; that the name "Seattle Dry Dock Co." meant nothing to them, but that the name "Sloan" meant considerable.

The CHAIRMAN. Well, was the Seattle Dry Dock Co. a corporation?

Mr. SLOAN. Yes, sir; organized under the laws of the State of Washington.

The CHAIRMAN. What was its capital stock?

Mr. SLOAN. $600,000 common and $400,000 preferred, $1,000,000 in all.

The CHAIRMAN. Was it paid in?

Mr. SLOAN. The preferred stock I was selling; that is, five years ago. The common stock was to be given as a bonus—that is, aside from the part that I was to get.

The CHAIRMAN. How much of the stock was paid in?

Mr. SLOAN. There is $317,000 worth of the preferred stock in the treasury; there is $83,000 issued; there was $35,000 of that given to me for tools, equipment, and good will, in addition to the common stock. And of the preferred stock I presume, when it is all paid, there will be approximately $56,000 of the preferred stock paid for—of the $83,000 that was issued; I mean, paid for in cash.

The CHAIRMAN. What plant or property did they have—the Seattle Dry Dock Co.?

Mr. SLOAN. When I organized it?

The CHAIRMAN. No; when you changed the name.

Mr. SLOAN. When I changed the name we were building the new plant at Olympia; we started to build the new plant at Olympia the 27th day of January last year.

The CHAIRMAN. Then did you have any plant at all—the Seattle Dry Dock Co.?

Mr. SLOAN. No.

The CHAIRMAN. You had no plant, no yard?

Mr. SLOAN. Only what we were then building when we changed the name. We asked the Secretary of State for authority to do so.

The CHAIRMAN. And you did not change the capital stock?

Mr. SLOAN. No.

The CHAIRMAN. It is the same corporation, except for the change in the name of the company?

Mr. SLOAN. That is exactly it.

Senator NELSON. As I understand it, there has been nothing paid in for the common stock?

Mr. SLOAN. No, sir.

Senator NELSON. And how much was the preferred stock—the total amount of preferred stock issued?

Mr. SLOAN. $83,000.

Senator NELSON. $83,000 was the total amount——

Mr. SLOAN (interposing). Issued.

Senator NELSON. Issued?

Mr. SLOAN. Yes.

Senator NELSON. How much of that has been sold?

Mr. SLOAN. Well, it has all been issued. There was $35,000 of that given to me for good will.

Senator NELSON. Yes.

Mr. SLOAN. Now, I have turned back part of that.

Senator NELSON. Well, I guess you do not understand my question: How much common stock was there?

Mr. SLOAN. $600,000.

Senator NELSON. How much preferred stock?

Mr. SLOAN. $400,000.

Senator NELSON. How much of that preferred stock was issued?

Mr. SLOAN. $83,000.

Senator NELSON. And no more has been issued?

Mr. SLOAN. No, sir.

Senator NELSON. How much common stock has been issued?

Mr. SLOAN. There is $318,000 of preferred stock in the treasury; the rest has been issued.

Senator NELSON. That makes $200,000-odd that has been issued, then?

Mr. SLOAN. No.

Senator NELSON. You say that $600,000 of the stock is common stock?

Mr. SLOAN. Well, it is all issued but $38,000—of the common stock.

Senator NELSON. Of the common stock?

Mr. SLOAN. Yes.

Senator NELSON. Who owns that common stock?

Mr. SLOAN. I own over half of it.

Senator NELSON. You own more than half of it?

Mr. SLOAN. Yes, sir.

Senator NELSON. And you paid nothing for it?

Mr. SLOAN. I did pay quite a bit for it. I gave the company, in cash, out of commissions that I made myself, as a present, $100,000; and I presume if I figured——

Senator NELSON (interposing). What did you give those commissions out of?

Mr. SLOAN. I got the commissions, or profits, on the sale of four motor ships.

Senator NELSON. For the company?

Mr. SLOAN. This was a private deal, you understand, and I gave the profits to the company.

Senator NELSON. Oh, you gave the profits to the company?

Mr. SLOAN. Yes, sir; although one man tried to prevail on me that the company had no right to the commissions, but I ought to keep them, which I did not do.

Senator NELSON. Now, how much do you say you have of the preferred stock that was given to you?

Mr. SLOAN. There was $35,000 worth of it given to me.

Senator NELSON. And where is the rest of that preferred stock that has been issued; who owns that?

Mr. SLOAN. Harvey D. Goulder owns some of it and John Ashley, V. H. Cowdrey, T. F. Newman, John Mitchell, D. C. McIntyre, W. H. Park and J. W. Fawcett, all of Cleveland, Ohio, own some of it. You know Harvey D. Goulder, do you not?

Senator NELSON. No, I do not know him.

Mr. SLOAN. And W. H. Goulder, of Cleveland, and Tom Moon, of Cleveland, and McIntyre, of Cleveland?

Senator NELSON. What did they pay for the stock?

Mr. SLOAN. Cash.

Senator NELSON. Par?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. What is the par value of the stock?

Mr. SLOAN. $100.

The CHAIRMAN. Did they pay in as much as $48,000, then?

Mr. SLOAN. The total is—it will amount to a total of $48,000 or $56,000, that was paid in.

The CHAIRMAN. You said that $83,000 was issued, and $35,000 was given to you?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Was that for good will?

Mr. SLOAN. Good will and tools.

The CHAIRMAN. How much of it was for tools?

Mr. SLOAN. There was an audit of my corporation made by Haskins & Sells, of New York; that should have been here to-day; we were

audited. Now, all that information is contained in the audit that is coming here; my attorney is coming down to-morrow with a copy.

The CHAIRMAN. Well, you are president of the company; can you not state, generally, what are the assets of the company?

Mr. SLOAN. Do you mean, what I gave to the company?

The CHAIRMAN. Yes—for that $35,000 that you received in stock.

Mr. SLOAN. I gave them six years' work; I gave them $2,000 in cash, and I gave them practically, I should say, $3,500 worth of tools.

Senator NELSON. Well, you say "six years' work." Was that six years' work that you had done or six years' work that you were to do?

Mr. SLOAN. The total of six years' work that I was doing.

Senator NELSON. That you had done or were to do?

Mr. SLOAN. That I was to do.

Senator NELSON. Oh.

Mr. SLOAN. I tell you what that was, Senator; I have got nothing to hide. I was authorized to go East from Seattle and sell the stock of the Seattle Dry Dock Co. Now, for six years, or a little over five years, between the time I left for the East and when I started our plant, I was to have $600 a month.

Senator NELSON. For selling the stock?

Mr. SLOAN. For selling the stock and paying my own expenses in the East.

Senator NELSON. Yes.

Mr. SLOAN. Among the lake men that I was brought up with, Harvey Goulder, Capt. John Mitchell, and some more. And they immediately joined me. Then certain conditions arose which blocked the sale of the stock; business went to pieces, and all that. I kept, as it were, hanging on until I started West and built our plant.

Senator CALDER. How long were you in the East?

Mr. SLOAN. I was in the East for a period of practically five years.

Senator CALDER. And did you receive $600 a month during that period?

Mr. SLOAN. I did not receive any, because there was not any money to pay me with.

The CHAIRMAN. But you sold during that period, apparently, $48,000 worth of stock?

Mr. SLOAN. Yes.

The CHAIRMAN. And the company was paying you $600 a month, which, for five years, would be $36,000.

Mr. SLOAN. But they did not pay me.

The CHAIRMAN. But their contract was to pay $36,000 to you for selling $48,000 worth of stock?

Mr. SLOAN. But I did not collect any. I gave that back to the company.

The CHAIRMAN. Now, you were the president of the company?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Then you started building your yard—when?

Mr. SLOAN. We started driving piles on the roadway, to take us from the mainland, at our present site, on the 27th day of January.

The CHAIRMAN. 1917?

Mr. SLOAN. 1917; and I came East on the 2d of March.

The CHAIRMAN. What have you at Olympia?

Mr. SLOAN. Eight boats under construction now.

The CHAIRMAN. I mean in the way of a yard.

Mr. SLOAN. In the way of a yard, about 800 feet water front; it covers about 12 acres in all, we have got 15. At low tide the ground underneath the yard is entirely bare. At high tide the yard is over water. In other words, at high tide, the top of the water is about 2 feet below the floor of the yard; the yard is entirely decked.

Senator NELSON. So that part of the time your yard is covered with water?

Mr. SLOAN. Not covered with water; the yard is over the water, just the same as this [indicating].

Senator NELSON. At high tide?

Mr. SLOAN. At high tide the yard is over the water; say this is the surface of our yard at Olympia; at high tide the water will be 2 feet below the yard; at low tide it is entirely bare underneath. There are 10,000 piles holding up—well, I guess it will go possibly to 11,500—holding up our yard.

Senator NELSON. What is the different between high and low tide there?

Mr. SLOAN. In the channel, the extreme depth is 20 feet.

Senator NELSON. I mean where your yard is?

Mr. SLOAN. Well, there, it would only be about 10 feet that the water would have to come up, and in some places not over 8 feet. But out in the channel it is 20 feet.

The CHAIRMAN. The yard is set in a marsh, is it?

Mr. SLOAN. No; it is built in what is called tide lands. Senator Jones knows what those are.

The CHAIRMAN. The entire yard is covered with 2 feet of water at high tide, is it?

Mr. SLOAN. The water comes within 2 feet of the floor of the yard, the top of the yard, at extremely high tide.

The CHAIRMAN. Have you got the entire 12 acres planked over?

Mr. SLOAN. Yes. There are pictures of our yard in the hands of Vice Chairman Stevens, of the Shipping Board, and there were photographs taken the day I left, that were to be here to-day.

Senator NELSON. Well, those tide lines belong to the State, do they not?

Mr. SLOAN. No; those tide lands that we have belong to the Olympia Tide Lands Association, and I leased those for $3,000 a year for five years, and negotiations were on in the fall, and are still on, to purchase those. It would be seven city blocks. The city of Olympia has vacated the streets in the yard, so that there would be no interference in the construction of the ships, or interference with the men working in the yard.

Senator NELSON. I had understood that the tide lands out there belonged to the State, and that the State did not sell them.

Senator JONES. They have sold a good many, I think, Senator Nelson.

Mr. SLOAN. They do not sell the water front, Senator Jones. That is simply leased.

Senator NELSON. This land that you leased could not have been bought, then? It could only be leased?

Mr. SLOAN. No; the site on which the yard could be; the water front area can not be bought; that is leased; but the yard itself can be bought.

Senator CALDER. Is that out to the high-water mark?

Mr. SLOAN. It goes to the channel. It is called the "harbor area." We will say the channel is 1,000 feet wide. Now, that would be 250 feet that the State controls, and only gets rid of on leases; they will never sell.

The CHAIRMAN. Do they charge much for that, or is it a nominal rent?

Mr. SLOAN. That is a nominal rent.

Senator CALDER. In what condition is your yard at present?

Mr. SLOAN. At present, we have eight boats under construction; the first four boats are full-powered motor ships, designed by Theodore E. Ferris.

Senator NELSON. You had a contract for building those originally with a company over in New York, did you not?

Mr. SLOAN. Yes, sir; the Clinchfield Navigation Co. I signed that contract a year ago, the 30th day of last December.

Senator NELSON. How much was that for each ship?

Mr. SLOAN. $310,000 apiece.

Senator NELSON. Completed?

Mr. SLOAN. Completed; yes, sir; that is a motor ship.

Senator NELSON. A motor ship completed for the water?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. What size?

Mr. SLOAN. They are 3,200 tons; they are practically the same size as the steamers, with the exception that they have motor power instead of steam, and they have a yacht stern, instead of a round stern.

Senator CALDER. They are wooden ships?

Mr. SLOAN. Yes, sir.

Senator NELSON. Do they have the Diesel motor?

Mr. SLOAN. A full Diesel engine, made by the McIntosh-Seymour Corporation.

The CHAIRMAN. How many contracts did you say you had for those?

Mr. SLOAN. Four of those. That was a year ago last December.

Senator CALDER. How much is that a ton?

Mr. SLOAN. What is that?

The CHAIRMAN. Is that 3,200 tons?

Mr. SLOAN. Yes, sir.

Senator NELSON. Was that the deadweight tonnage?

Mr. SLOAN. Yes.

Senator NELSON. I thought they did not build any less than 3,500 tons up there?

The CHAIRMAN. The Ferris type was 3,500 tons.

Mr. SLOAN. The difference between the Shipping Board steamers, Ferris standard type, and the motor ships is this: The motor ships are 280 feet long, 46 feet beam, and 24 feet molded depth. The steamers are 281 feet 6 inches long; that extra 18 inches was added on account of the gun deck. They are 46 feet beam and 26 feet molded depth.

Senator NELSON. Let me ask you this: When you made the contract with the Clinchfield Navigation Co. for those four vessels, what was your arrangement with the company?

Mr. SLOAN. With which company? Mine?

The CHAIRMAN. The Clinchfield Co.

Senator NELSON. They made a bargain with you to build those ships, did they not?

Mr. SLOAN. Yes, sir.

Senator NELSON. And did you have any bargain between you and Mr. Ferris?

Mr. SLOAN. No, sir.

Senator NELSON. Did you know anything about his receiving a commission, or that he was to receive a commission?

Mr. SLOAN. Are you talking about the motor ships?

Senator NELSON. I am talking about the four. Afterwards you made a contract for four more, did you not?

Mr. SLOAN. The first four?

Senator NELSON. Yes. They were turned over to the Government?

Mr. SLOAN. Not those four, Senator.

Senator NELSON. I mean the four that the Government took over. What was the price you got for them?

Mr. SLOAN. Those were the four steamers.

Senator NELSON. Yes.

Mr. SLOAN. $385,000 apiece.

Senator NELSON. I do not refer to those that you never turned over to the Government; I mean the four that you contracted for with the Clinchfield Co. and which were afterwards taken over by the Fleet Corporation.

Mr. SLOAN. We agreed about the terms on the 25th day of last March, and the contract was signed on the 30th day of March.

Senator NELSON. Between you and——

Mr. SLOAN. The Clinchfield Navigation Co.

Senator NELSON. At $385 a ton?

Mr. SLOAN. $385,000 apiece.

Senator NELSON. A ship?

Mr. SLOAN. Yes. Those were to be exact duplicates of the motor ships so far as the construction of the hull went. They were to have steam engines instead of motors and have a round stern instead of a yacht stern.

Senator NELSON. Were they to be 3,500 tons dead-weight?

Mr. SLOAN. No, sir; 3,200.

Senator NELSON. But they were to be steamships?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. You have four motor ships you agreed to build for the Clinchfield people?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Those the Government never had anything to do with?

Mr. SLOAN. No, sir.

The CHAIRMAN. You are going on with those now?

Mr. SLOAN. They were putting the ways under the first of those boats when I was in the yard a week ago last Tuesday.

The CHAIRMAN. That is separate and distinct from the Government contract?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. You are going ahead with that work now?

Mr. SLOAN. Yes, sir.

Senator JONES. I want to suggest that he made a contract with the Clinchfield Navigation Co. for four steamers.

Mr. SLOAN. Yes; I will start in there.

Senator CALDER. Just a minute, please, before you take that up. Were these four motor ships for the Clinchfield Co.?

Mr. SLOAN. Yes, sir.

Senator CALDER. The first four?

Mr. SLOAN. Yes, sir.

Senator CALDER. You are building those for them now?

Mr. SLOAN. No, sir; I sold those boats for the Clinchfield Co. to R. M. Calkins, of Seattle, for other purposes; for whom I do not know. I think we closed the deal on the 6th day of June.

Senator CALDER. And you have just started to build another, you say?

Mr. SLOAN. Oh, no; no——

Senator CALDER. Are they completed?

Mr. SLOAN. The pilot houses on the first two boats are completed. We were delayed on shafting and equipment of that nature. This first boat may be launched now; they were putting the ways under a week ago last Tuesday. The second boat was practically ready to launch also, I believe.

Senator CALDER. Why did not the Shipping Board take these first four?

Mr. SLOAN. Senator, I do not know; I could not answer that question.

The CHAIRMAN. You say you sold them to somebody else?

Mr. SLOAN. To R. M. Calkins.

The CHAIRMAN. Did you sell them, or did the Clinchfield Co.?

Mr. SLOAN. I sold them for the Clinchfield people.

The CHAIRMAN. The Clinchfield people sold them through you—you did not own them?

Mr. SLOAN. No; I did not own them.

The CHAIRMAN. The Clinchfield people sold them through you?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. They are still in your yard?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Are they the people who are building them?

Mr. SLOAN. We are building them.

Senator CALDER. For the Clinchfield Co.?

Mr. SLOAN. Well, for the new owners now.

Senator CALDER. What did the Clinchfield Co. get for these four vessels?

Mr. SLOAN. $500,000 apiece.

Senator NELSON. What did you say?

Mr. SLOAN. $500,000 apiece.

Senator NELSON. For those four vessels?

Mr. SLOAN. Yes, sir; $2,000,000 for the four.

Senator CALDER. Then they made in the neighborhood of $500,000?

Mr. SLOAN. Mr. Bockus, of the company, made a verbal agreement with me to divide the profits on the motor ships evenly.

The CHAIRMAN. What was the contract to build them? What did the contract call for?

Mr. SLOAN. $310,000.

The CHAIRMAN. $310,000?

Mr. SLOAN. That was the motor ships.

Senator NELSON. And you sold them to Mr. Bockus?

Mr. SLOAN. No, sir; I sold them to Mr. Calkins for $500,000 apiece.

Senator NELSON. And you and he were to divide the profits over $310,000?

Mr. SLOAN. No; wait. There was a commission of 5 per cent paid to Mr. Calkins, and then the difference between that, which would be $660,000, Mr. Bockus, of the Clinchfield Co., and myself were to divide. Instead of dividing, as I understood it, they were to take $360,000——

Senator NELSON. The Clinchfield Co.?

Mr. SLOAN. The Clinchfield Co. And I would take $300,000, and they paid me $100,000 of that $300,000, and that I gave to the company. Now, if I am able to collect, the other $200,000 goes to the company also.

The CHAIRMAN. Did you have any further contract with the Clinchfield Co.?

Mr. SLOAN. I will start on that. On the 25th of March last I made a deal with Mr. Bockus for four steamers.

Senator NELSON. Who is he?

Mr. SLOAN. He is the president of the Clinchfield Co.—for four steamers.

Senator NELSON. That is a New York company, is it not?

Mr. SLOAN. Yes, sir. I made a contract for four steamers, to be duplicates, practically, as I said, of the motor ships, with the exception that they are to have steam engines. Those were also designed by Theodore E. Ferris.

Senator NELSON. Yes.

Mr. SLOAN. I never met Mr. Ferris until I met him in the Clinchfield office.

Senator NELSON. What prices were you to get for them?

Mr. SLOAN. $385,000 apiece. Then we signed that contract on the 30th day of March, and they paid me $154,000.

Senator NELSON. On the contract?

Mr. SLOAN. On the contract. Then on the 6th or 7th of April, I have forgotten which date, I started negotiations with the Cunard Line on a sale of the motor ships for the Clinchfield Co. Mr. Bockus and Mr. Ferris considered that they wanted steamers instead of motor ships, and if I could sell the motor ships for them it meant so much more money for the Sloan Shipyards Corporation, and I could get another contract for four more steamers. So I asked $500,000. Then I also asked $480,000, the middle of April, for the steamers. I had given on the 12th day of April, I believe it was the 12th, an option to the Clinchfield Co. for 12 steamers at a price to be agreed upon if they took them. If they sold them themselves, then I was to pay them a commission of 5 per cent.

Senator NELSON. How do you account for the fact that after they had bargained with you for four vessels at $385,000 they were afterwards bargaining with you for more vessels at $500,000?

Mr. SLOAN. For the reason that prices were advancing a whole lot. You take three years——

Senator NELSON. No; that was only within a month or two.

Mr. SLOAN. All right. This is the point I am getting at: They were delivering steel steamers from the Great Lakes down to New

York as low as $180,000. Then within a few months prices went up to $750,000 or $800,000 for the same boats.

Senator NELSON. How do you account for the Clinchfield Co. wanting you to sell those boats, those four steam vessels that they had bargained with you for, for $385,000, and then wanting you to take contracts for a good many more at $500,000? How do you account for that?

Mr. SLOAN. Senator, I asked the Cunard Line $480,000, you understand, within two weeks after I had made my deal with the Clinchfield. Then I made a deal with the Clinchfield and gave them an option on 12 boats. Now, they might have kept the 12 boats themselves. If they did, then we were to arrange for a price; if they sold those 12 boats to somebody else, I was to pay them a commission of 5 per cent. Then I made a deal and signed that deal with the Clinchfield Co. on the 21st of April last, making them our agent in New York for one year, and agreed to pay them in that contract a commission of 5 per cent. That was the usual charge for brokerage services.

Senator NELSON. A commission on what?

Mr. SLOAN. On all the business they would get for the Sloan Shipyards Corporation for one year. That contract expires on the 21st day of this coming April.

The CHAIRMAN. Now, they would pay how much for these 12 that their option called for?

Mr. SLOAN. There was no price agreed on on thag at all. If they kept them themselves, then we would agree on a price; but in the little agreement—and my mail has been delayed—it was agreed the price would be satisfactory to us.

Senator NELSON. Now, Mr. Sloan, come down to the time you entered into a contract with the Fleet Corporation. Did not that involve, in the first place, taking over four of these Clinchfield ships that you had under contract?

Mr. SLOAN. Yes; the Clinchfield people owned those, Senator.

Senator NELSON. They owned those, and you had agreed to build them for $385,000?

Mr. SLOAN. Yes. But, Senator, those were not the same as the motor ships, you know.

Senator NELSON. They were steam vessels?

Mr. SLOAN. Steam; but I mean the construction of the hull was to be the same as the motor ships.

Senator NELSON. I understand.

Mr. SLOAN. Now the Ferris type of standard boat for the Government is entirely different.

Senator NELSON. How did you work to transfer that contract with the Clinchfield Co. to the Government and you? Tell us the modus operandi without any concealment. I do not mean to imply that you would conceal anything. I do not want you to understand that.

Mr. SLOAN. It was stated before this committee that Mr. Barnett introduced me to Gen. Goethals. I was not in Washington from December 26, 1916, until October 23, 1917. I do not know Gen. Goethals. I do not know Mr. Cotton. Consequently, I was not introduced to them. Whatever negotiations were carried on between

the Clinchfield Navigation Co. and the Shipping Board I know nothing about whatever. I was in Seattle, Wash.

Senator NELSON. How did you get in touch with the Shipping Board if you were not here? Was it by writing?

Mr. SLOAN. No. I never met any of the Shipping Board people until the 23d day of last October. I was in New York, and I left New York on the 26th day of April last. I was asked by Mr. Barnett, of the Clinchfield Navigation Co., and Mr. Ferris, if I would not build some of the Government boats. I had wired my brother beforehand that I would not.

Senator NELSON. That you would not?

Mr. SLOAN. Yes—I will be very frank—for the simple reason that there has never been a contract given to a shipyard by the Government yet that the unnecessary red tape would not almost break an ordinary shipbuilder.

Senator NELSON. Will you please repeat that?

Mr. SLOAN. The unnecessary red tape——

Senator NELSON. Would wreck?

Mr. SLOAN. Would almost break an ordinary shipbuilder. Mr. Barnet and Mr. Ferris prevailed on me to consent to do Government work. I pledged myself to Mr. Ferris that if he wanted me to I would take Government work, providing I could build the boats under his direct supervision just the same as I was building the four motor ships under his supervision.

The CHAIRMAN. Was that in his New York office?

Mr. SLOAN. Yes, sir.

Senator JONES. Was he then in the employ of the Emergency Fleet Corporation?

Mr. SLOAN. No, sir; I do not think he was.

Senator JONES. That was April 28 of last year?

Mr. SLOAN. Yes, sir. I do not know whether he had closed with the Shipping Board then or not.

Senator JONES. Did he represent to you that he expected to?

Mr. SLOAN. He expected to; yes.

Senator JONES. His statement was that he was in their employ before that?

Mr. SLOAN. That he was in the employ of the Clinchfield people?

Senator JONES. That he was in the employ of the Emergency Fleet Corporation before that date?

Mr. SLOAN. He was before this contract was signed.

Senator JONES. Well, he was before April 28, according to his testimony here. But that will speak for itself.

Senator NELSON. So you negotiated through Mr. Ferris, then?

Mr. SLOAN. No; I had nothing to do with any negotiations whatever. The Sloan Shipyards Corporation had absolutely nothing to do with the Shipping Board then.

Senator NELSON. Well, who in the world negotiated with the Government about this contract?

Mr. SLOAN. Mr. Barnett, of the Clinchfield Navigation Co., was selling to the Government 4 boats that he had under contract with us and 12 that he had under option.

Senator NELSON. He made the contract for your company?

Mr. SLOAN. Practically. That contract was signed by Mr. Leroy Richards, who was our resident vice president in New York at

that time, after I had been wired that the contract was all right. I did not see a copy of the contract, or the contract, until a week after it was signed.

Senator NELSON. And that was $100,000 more on the ships than you had agreed to build them for the Clinchfield Co. for?

Mr. SLOAN. Now, Senator——

Senator NELSON. Now, answer that. Don't equivocate. You had agreed to build the four ships for the Clinchfield Co. at $385,000?

Mr. SLOAN. Yes, sir.

Senator NELSON. And the new contract included those ships, and you were to get $100,000 more for each of them?

Mr. SLOAN. Well, Senator——

Senator NELSON. Now, wait; you can answer that.

Mr. SLOAN. Wait a minute. Out of that $100,000 comes practically $50,000 apiece for the first four steamers, to conform to the specifications of the standard ship for the Shipping Board.

Senator NELSON. Well, even on your figures that left $300,000.

Mr. SLOAN. No.

Senator NELSON. Yes; $150,000——

Mr. SLOAN. No; $220,000.

Senator JONES. What have you to say, Mr. Sloan, to Mr. Ferris's statement that the changes required would not cost more than $25,000 for each boat?

Mr. SLOAN. That was Mr. Ferris?

Senator JONES. Yes, sir.

Mr. SLOAN. My brother, who is a practical man, and one or two others, believe it will cost $50,000 apiece.

Senator JONES. In other words, Mr. Ferris was very sadly mistaken?

Mr. SLOAN. I think he is now. My brother has already told him that.

Senator NELSON. Well, did he change it as to those first four that you had under contract?

Mr. SLOAN. Oh, yes, sir.

Senator NELSON. And as to the other 12?

Mr. FERRIS. The other 12 went right along. There was no change in those.

Senator NELSON. So that the 4 and the 12 made 16 ships in all?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. You say the Clinchfield people assigned your option for 12?

Mr. SLOAN. No; what they did, Senator, was this: They had the option on 12 and they had the contract——

Senator NELSON. Have you with you that option contract? Can you produce it here?

Mr. SLOAN. It is in writing, and the papers were to come to-day—yes, sir.

Senator NELSON. Can you show us the option contract with Clinchfield Co.?

Mr. SLOAN. Yes, sir.

Senator NELSON. I wish you would get it and put it in the record.

Mr. SLOAN. I will, sir.

The CHAIRMAN. What price was paid for these 12?

Mr. SLOAN. The 12? It was not fixed—"at a price satisfactory to the Sloan Shipyards Corporation."

Senator NELSON. I mean the contract with the Clinchfield Co.

Mr. SLOAN. We were to get—our price was $463,000 to get a release from the Clinchfield, so that they——

The CHAIRMAN. Wait a minute; let us see; $463,000?

Mr. SLOAN. The price is $490,000, Senator, less 5½ per cent. I think it amounts to $490,000.

Senator NELSON. An increase of over $100,000 over what you were to build them for?

The CHAIRMAN. No; that is a different one. I am trying to get at the 12. The price fixed on those contracted for with the Government was to be how much?

Mr. SLOAN. $490,000.

The CHAIRMAN. That was the contract between your company and the Government for 12—$490,000 apiece?

Mr. SLOAN. Senator, what I am trying to explain is this: I had nothing to do with it, and what the Clinchfield did, was this: The Clinchfield sold the first four boats; that is, the first four steamers. Or, in other words, they gave to the Government the four steamers that they had and an option on 12 more, making 16.

The CHAIRMAN. That is, they transferred the contract?

Mr. SLOAN. They transferred them; they released the Sloan Shipyards Corporation from their contract with them.

The CHAIRMAN. Will the Government have them at the same price they were paying you?

Senator JONES. No; $490,000.

Mr. SLOAN. $490,000.

Senator NELSON. $490,000, and the price originally for those four was $385,000?

Mr. SLOAN. Yes, sir; but the boat was different.

Senator JONES. But you entered into a contract with the Fleet Corporation for 16 ships at $490,000 apiece?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. That was the contract between your company and the Fleet Corporation?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. 16 ships at $490,000?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. That contract was sent to your vice-president in New York?

Mr. SLOAN. Yes, sir.

Senator NELSON. What commission was the Clinchfield Co. to get out of that?

Mr. SLOAN. This is where the release of the Clinchfield comes in. To get a release from the Clinchfield so that we could get a contract with the Shipping Board we had to refund to the Clinchfield, or return to the Clinchfield, an advance payment of $154,000 that they made on the first 4 steamers. Then, in consideration of the release of the option on 12 more, we paid them, on the basis of the commission that was in the agency agreement, 5½ per cent.

Senator NELSON. On the 16 ships?

Mr. SLOAN. No; on 12.

Senator NELSON. On 12 at $490,000?

Mr. SLOAN. At $490,000. But it was plus one-half per cent, making it 5½ per cent to act as our New York agents. Now, the consideration was based on an agreement for one year. That was 5 per cent. Then they were under obligations to Mr. Ferris for designing the whole lot of ships. They told me that as long as they were not going to go on with the boats I should stand half of Mr. Ferris' fee, which was 1 per cent. That would be half of 1 per cent for us, making a commission of 5½ per cent.

Senator NELSON. Mr. Ferris was to have 1 per cent on all these ships?

Mr. SLOAN. On the 16.

Senator NELSON. Including the 4?

Mr. SLOAN. Yes, sir; as I understand it.

Senator NELSON. And you were to pay half of it?

Mr. SLOAN. I paid half of it on the 12; that is, one-half of 1 per cent.

Senator JONES. That is, Mr. Ferris was to get 1 per cent commission?

Mr. SLOAN. On the 12.

Senator JONES. At the rate of $490,000 for each ship?

Mr. SLOAN. Yes, sir.

Senator JONES. He was to have a commission of 1 per cent on that?

Mr. SLOAN. Yes, and I stood half.

Senator NELSON. And then in addition you had to pay the Clinchfield Co. 5 per cent?

Mr. SLOAN. Yes, sir. They had me under a written contract for one year.

Senator JONES. You paid to the Clinchfield people your half of that release commission?

Mr. SLOAN. No, sir; I have not paid it yet. Now, the $154,000 represented what they had paid to me; that had to go back to them. Then the 5½ per cent was based on a consideration in the contract as an agent for one year.

Senator NELSON. Now, your option contract for the 12 vessels for the Clinchfield Co.—you had agreed to build four of them at $385,000?

Mr. SLOAN. Not of the 12, Senator.

Senator NELSON. I say, as to the four that you had agreed to build, what was the option price you agreed on?

Mr. SLOAN. There was not any.

Senator NELSON. No price?

Mr. SLOAN. No, sir.

Senator NELSON. There was nothing in the option as to the price at which you would build?

Mr. SLOAN. No. At a price satisfactory to us.

Senator NELSON. Was that the language?

Mr. SLOAN. Yes, sir; as nearly as I can remember.

The CHAIRMAN. The Sloan Shipyards Corporation entered into a contract with the Emergency Fleet Corporation, through the Clinchfield Navigation Co., to build 16 ships at $490,000 each?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. You proceeded to do that, and the first deliveries under this contract were these four?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Which you changed so as to correspond to the Ferris type?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. And those four you had agreed to build at $385,000?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. But you get for them from the Government $490,000 when they are changed to the Ferris type?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. And it costs, you say, $50,000 to make that change?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Mr. Ferris says $25,000.

Senator NELSON. Can you state—I do not expect you to go into details—the changes Mr. Ferris made?

Mr. SLOAN. Practically; I will give it to you in a very brief way. The boats took about 200,000 feet more of timber than the motor ships. There was a round stern——

Senator NELSON. Yes, but these four ships were not to be motor ships.

Mr. SLOAN. No. It takes about 200,000 feet more of timber to change the ships to conform to the specifications of the Shipping Board—the Ferris type we call it. It took 200,000 feet more of timber than the steamers as originally planned. Then they are steel strapped; the others were not steel strapped.

Senator NELSON. Let me ask you there—because of course I know nothing about any ships except prairie schooners—why would not the fact that you add so much to the cost of the ships give that much more commission to Mr. Ferris?

Mr. SLOAN. No.

Senator NELSON. Why? If the cost of the ships is to be more, would it not add more to his revenue?

Mr. SLOAN. No; Mr. Ferris's commission was based on the price. What his negotiations were with Mr. Barnett, of the Clinchfield, I know nothing about. I simply agreed to pay one-half of 1 per cent.

Senator NELSON. Do you think those changes were necessary? Would not the boats have been all right if they had been constructed as originally planned?

Mr. SLOAN. I think so, Senator.

Senator NELSON. They would have been strong enough?

Mr. SLOAN. I think so, for this resaon: The first four boats, the motor ships and the steamers as originally planned, were being built under British Lloyd's registry.

Senator NELSON. And were they satisfactory to that registry?

Mr. SLOAN. Yes, sir; they were satisfactory. They were built for over-ocean service.

Senator NELSON. Then, according to your view, if I understand you correctly, you do not think there was any necessity for making those changes?

Mr. SLOAN. No; I do not.

Senator NELSON. And the changes occasioned both delay and an increase in the cost of material, did it?

Mr. SLOAN. We would have gotten, and are getting to-day, just as high a price for the boats without the strapping on them as with the strapping, because they are not strapping any boats. They figure that the wooden ship program is temporary; it is a filler in, and it is only a filler in.

Senator NELSON. I understood the other day from testimony that was given here that part of that contract with the Government for these 16 ships that you made with the Clinchfield Co. involved paying you a salary of $25,000 a year.

Mr. SLOAN. The Clinchfield Co. had absolutely nothing to do with my salary whatever.

Senator NELSON. No; but I mean was not that the contract between you and the Government—the original contract?

Mr. SLOAN. It mentioned a salary of $25,000?

Senator NELSON. Yes.

Mr. SLOAN. No, sir.

Senator NELSON. I understood the other day that you were to get a salary of $25,000 from the company or somebody.

Mr. SLOAN. After I had given the $100,000 to the company, which was on the 6th of July, on the 20th of July at our annual stockholders' meeting, they voted me a salary of $25,000 a year. Nobody had anything to do with it but the trustees.

Senator NELSON. Your company voted to pay you $25,000 a year?

Mr. SLOAN. Yes, sir.

Senator NELSON. That explains it. I got the impression from the testimony the other day that you were to have $25,000, and that they had modified it now so that you would only receive $10,000.

Mr. SLOAN. Whatever I have done—we are always liable to error; I have made mistakes—I have done voluntarily—I did not hesitate a moment to accept at the rate of $10,000 a year while the Government contract was being filled.

Senator NELSON. From the Government?

Mr. SLOAN. Not from the Government; from the Sloan Shipyards Corporation.

Senator NELSON. The Government does not pay you the $10,000?

Mr. SLOAN. The Sloan Shipyards Corporation pays me. It is charged up.

Senator NELSON. It is added to the cost of the ship, then?

Mr. SLOAN. Oh, yes.

Senator NELSON. That is what I mean.

Mr. SLOAN. You mean it is added to the cost of the ship?

Senator NELSON. Yes.

Mr. SLOAN. Oh, no; it comes out of the cost of the ship, the contract price, $490,000.

The CHAIRMAN. You mean the Sloan Shipyards Corporation pays your salary of $10,000?

Mr. SLOAN. At the rate of $10,000 a year.

The CHAIRMAN. The Government does not pay that?

Mr. SLOAN. No, sir.

The CHAIRMAN. Except so far as the Government may advance payments from time to time on the contract?

Mr. SLOAN. That is all.

The CHAIRMAN. How far had you got along with these four ships when your contract with the Government was made on May 18, 1917?

Mr. SLOAN. There were two keels—there was one keel laid, and I think we were getting ready to lay a second keel.

The CHAIRMAN. How many ways have you there?

Mr. SLOAN. We have put in two more ways, making a total of eight ways.

The CHAIRMAN. You then sublet the contract for some of these boats to the Sloan Shipyards Co.?

Mr. SLOAN. No; to the Anacordes Co.

Senator NELSON. Before you go any further with that, excuse me for interrupting. It is a part of your contract with the Government for the building of these ships that they shall advance money to you for the shipyards?

Mr. SLOAN. There is nothing said in our contract with the Government——

Senator NELSON. I mean the original contract you made with the Emergency Fleet Corporation?

Mr. SLOAN. There was nothing said about how the money was to be spent.

Senator NELSON. No; but we have to advance money toward increasing or enlarging or building your yard?

Mr. SLOAN. There was nothing said in the contract about any enlargement of the yard or anything else in respect to that.

Senator NELSON. Were they to advance you any money before any ships were built?

Mr. SLOAN. Yes.

The CHAIRMAN. This is the statement of Admiral Bowles on that point:

Our contract with them provided for two advance payments—11 per cent on each of the vessels, amounting to $862,400, 30 days after signing the contract; and an additional 11 per cent, amounting to $862,400, 60 days after signing the contract making a total advance payment of $1,724,800.

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Is that correct?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. That was irrespective of how far the vessels had progressed?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. They would do that within so many days, regardless of whether you built any ships or not?

Mr. SLOAN. Yes, sir; but we had either bought and paid for or obligated ourselves for equipment, machinery, engines, and boilers.

Senator NELSON. Well, no matter what the language might be, was not that in effect advancing you money to build them with?

Mr. SLOAN. We understood we had a right to use a part of that money for finishing up the plants and equipment or anything else that was necessary.

Senator NELSON. Did you divert a part of that money to another shipyard?

Mr. SLOAN. We gave the Anacortes Shipbuilding Co. a contract for six steamers, and we paid them their advances just the same as we got ours. That was done for the purpose of expediting delivery of the steamers. I wanted my brother associated with me for this reason.

Senator NELSON. That was another corporation then?

Mr. SLOAN. Yes, sir.

Senator NELSON. But you were interested in that too?

Mr. SLOAN. No, sir.

Senator NELSON. Your brother was?

Mr. SLOAN. Yes, sir.

Senator NELSON. That was at Anacortes?

Mr. SLOAN. Yes, sir.

Senator NELSON. They had no yard then before you advanced them the money?

Mr. SLOAN. They had the property.

Senator NELSON. They had the land?

Mr. SLOAN. Yes, sir.

Senator NELSON. But they had no shipbuilding plant?

Mr. SLOAN. No, sir.

Senator NELSON. So that you advanced them the money to build a plant up there?

Mr. SLOAN. Yes, sir.

Senator NELSON. Then, practically all this money was advanced by the Government and used for building these yards, enlarging your home yard, and building this Anacortes yard?

Mr. SLOAN. I had already bought and paid part on engines, boilers, equipment, and all that, amounting to almost $1,000,000.

Senator NELSON. When?

Mr. SLOAN. When? Up to——

Senator NELSON. Why did you buy equipment before you had laid a keel for those ships?

Mr. SLOAN. My dear Senator, you have got to do that in order to get your equipment and material in time.

Senator NELSON. And pay in advance?

Mr. SLOAN. Why, surely. We paid the Puget Sound Machinery Co. on 10 engines and 10 sets of boilers $287,062.07. All our commitments were verified by the auditor in Seattle and confirmed before there was any money paid. This is in his report to the Shipping Board.

Senator NELSON. How much has been paid to you?

Mr. SLOAN. I do nor know how much has been paid now.

Senator NELSON. Well, how much was paid before the contract was changed? We will come to that later.

Mr. SLOAN. $1,724,000.

The CHAIRMAN. $1,724,000?

Mr. SLOAN. Yes.

The CHAIRMAN. What did you do with that $1,724,000?

Mr. SLOAN. I have not the exact figures. The report on it will be here to-morrow, and I am going to file a copy of it with the committee. But I should say a million dollars went for machinery, equipment, and timber.

Senator NELSON. How much did you expend for the Anacortes yard?

Mr. SLOAN. There was $225,667.64 paid the Anacortes people.

Senator NEKSON. Is their yard in operation now?

Mr. SLOAN. Oh, yes.

Senator NELSON. Have they any ways?

Mr. SLOAN. Oh, yes; there are two boats half in frame and two more keels laid.

Senator NELSON. Was their yard completed before this last change in your contract?

Mr. SLOAN. Yes, sir; and they were framing the boats.

Senator JONES. His brother made a very full statement about the Anacortes yard yesterday.

Senator NELSON. I was not here yesterday. You must excuse me for asking those questions.

Mr. SLOAN. I want to tell you everything I know. In addition to that there was the $154,000 that the Clinchfield people advanced me on their contract. That was returned to them.

Senator NELSON. You returned it to them?

Mr. SLOAN. Yes, sir. Then there was $167,000 for their proportionate share. That is where I made an error, you understand. I plead guilty. I should have had them wait until contracts were completed.

Senator NELSON. In what respect?

Mr. SLOAN. The Clinchfield got, out of that $1,700,000, $167,000.

Senator NELSON. On what account?

Mr. SLOAN. On account of their profits on their boats. That has been done right along. They got that.

Senator NELSON. That was the 5 per cent?

Mr. SLOAN. No. We will say it was partly that and partly their profit on the first four.

Senator NELSON. On the four motor boats?

Mr. SLOAN. No; on the four steamers that the Government took.

Senator NELSON. Well, they were to have 7 per cent on that, too, or were they not?

Mr. SLOAN. No, only 5½ per cent, Senator.

Senator NELSON. The one-half was to Mr. Ferris?

Mr. SLOAN. Yes, and I paid that.

Senator NELSON. Was there to be no commission then, on the four steamers?

Mr. SLOAN. No; that was their profit.

Senator NELSON. That is, the profit between what you agreed to build them for and what the Government paid for them?

Mr. SLOAN. Less what it cost to make the changes.

Senator NELSON. In other words, that is what they made out of the Government—not you? Is not that so?

Mr. SLOAN. Why, I am going to make a statement now. The Clinchfield people, if they had held those boats instead of letting the Government take them, would have made at least $800,000 more than they are making out of the Government.

Senator NELSON. When I was a soldier during the war we used to have what we called Confederate arithmetic. Are you not indulging a little in that?

Mr. SLOAN. No; this is very easily figured out. I sold for them the motor ships at $500,000 apiece. It does not take very much figuring to figure out what they could have made if they had kept the four boats at $385,000 without any changes being made and exercised their option on the 12.

Senator NELSON. Then, according to your theory, they were very generous to the Government.

Mr. SLOAN. I am not saying whether they were or not.

The CHAIRMAN. How much more did you give them?

Mr. SLOAN. That was all; a total of $317,000.

Senator NELSON. That you gave them?

Mr. SLOAN. Yes; that was $154,000 that they advanced on the original contract.

Senator NELSON. Then the other $154,000 was a commission?

Mr. SLOAN. The other $167,000. It was not a commission; that was their profit. I had nothing to do with that.

Senator NELSON. That came out of the Government through you?

Mr. SLOAN. Yes, that came out of the Government through me. I plead guilty to that; but it was what was done in every other case.

Senator JONES. And they negotiated the contract with the Government, really, under which you paid that?

Mr. SLOAN. Yes; they owned it.

The CHAIRMAN. Mr. Sloan, you have offered, I believe, to put in evidence the option which the Clinchfield people prepared?

Mr. SLOAN. Yes; I have pledged my word on that.

Senator NELSON. I wish you would put in the original company contracts.

Mr. SLOAN. You will get it, Senator, and the original agreement for the agency for one year; yes, sir.

The CHAIRMAN. Send them to me, and I will have them inserted in the record.

Senator NELSON. I did not want to break in on you. Go ahead.

Mr. SLOAN. What I want to get at, Senator, is this. Have you got clearly in your mind the connection that I had with the Clinchfield and the negotiations that the Clinchfield people had with the Shipping Board in placing this contract?

Senator NELSON. Yes; they were your agents and also the agents of the Government.

Mr. SLOAN. But they owned the boats. I had nothing to do with it. I did not own the boats; they were the Clinchfield's boats.

Senator NELSON. It was just a contract they had with you. Were the keels laid for all four boats?

Mr. SLOAN. There were two keels laid.

Senator NELSON. That was all?

Mr. SLOAN. And the equipment bought. I contracted for the equipment early in April.

Senator NELSON. What I was coming to was about the new and last arrangement with the Government?

Mr. SLOAN. There has been no agreement completed between the Government and myself up to the present time.

Senator NELSON. There has not?

Mr. SLOAN. No, sir.

The CHAIRMAN. What is the situation now? Is that yard operating?

Mr. SLOAN. The Shipping Board is operating the yards.

The CHAIRMAN. Both of them?

Mr. SLOAN. Yes, sir.

Senator NELSON. When did they take them over?

Mr. SLOAN. I believe they took them about the 15th of December—they have not taken them over yet; they are simply in there.

The CHAIRMAN. Operating with your force and for your account?

Mr. SLOAN. No; they have discharged everybody I had.

The CHAIRMAN. They put in new people altogether?

Mr. SLOAN. Yes. I had signed a supplementary agreement that Mr. Stern, who is sitting over here now, sent up to Mr. Haight, and I signed those four agreements on the 28th day of November.

Senator NELSON. Those are the contracts I referred to.

Mr. SLOAN. Those contracts are entirely changed; they were never enforced.

Now, I got back home in the 5th of December. I found things entirely different from what I had expected.

Senator NELSON. In what respect?

Mr. SLOAN. In every respect. I was a scoundrel; I was every single thing but a murderer. The Sloan Shipyards Corporation, from the time we started last January up to and including the 10th day of October, discounted our bills, and we had an enviable credit. On the 30th of August our first payment was due from the Government on period payments; that would be the third payment under our contract.

Senator NELSON. That is part of the $1,700,000?

Mr. SLOAN. Yes; that was when the first boat was half framed. We wrote on August 31 to the United States Shipping Board Emergency Fleet Corporation. That letter and their reply dated September 1, 1917, are as follows:

AUGUST 31, 1917.

UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION,
Seattle, Wash.

Attention Mr. Purse.

GENTLEMEN: We hereby apply for third payment on vessel (hull *No. 39*), the keel being laid and ship half in frame.

This is in accordance with the terms of our contract dated May 18, 1917.

Trusting you will find same in order, we are,

Respectfully, yours,

SLOAN SHIPYARDS CORPORATION.

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION,
Seattle, Wash., September 1, 1917.

SLOAN SHIPYARDS CORPORATION,
552 Colman Building, Seattle.

GENTLEMEN: I am in receipt of yours of yesterday advising that the third payment on hull *No. 39* is now due, on account of keel being laid and ship half in frame.

This matter will receive our immediate attention.

Yours, very truly,

JOHN PURSE, *District Auditor.*

Senator NELSON. Did you lay these keels within the time prescribed in your contract?

Mr. SLOAN. There was no time prescribed in the contract.

Senator NELSON. When were the other ships to be completed?

Mr. SLOAN. The first boats were to be delivered January 30.

Senator NELSON. January 30 of this year?

Mr. SLOAN. This year; yes.

Senator NELSON. Of those four original boats?

Mr. SLOAN. Of the whole 16. Two the 30th of January, two the last day of February, four the last of March, two the last of April, May, June, and July of this year.

Senator JONES. How much are you behind that program?

Mr. SLOAN. The engines alone, practically three months. I am going to file this statement about engine delays with this committee. On account of timber, strikes, and annoyances caused, my brother

stated yesterday, four months. If we get through in six months we will be doing splendidly.

The CHAIRMAN. How much were you delayed by strikes?

Mr. SLOAN. Strikes we had in our own yards.

Senator NELSON. And then you had strikes in the woods?

Mr. SLOAN. Yes, sir.

Senator NELSON. Among the loggers?

Mr. SLOAN. Yes.

Senator NELSON. And the sawmill men?

Mr. SLOAN. Yes; the sawmill men went out. I will tell you what started the delay in getting timber. Our contract was the first or second that was signed. We were buying ship timber delivered in our yard for $28.50. I wired from New York, either in April or the last of March, to contract for 20,000,000 feet of timber. We could not buy a dollar's worth of timber, for the reason that the timber people were negotiating then with the Shipping Board as to what their wants would be. Then they settled on a price of $35 a thousand.

Senator NELSON. Average price?

Mr. SLOAN. Yes, sir; and we were paying at that time $28.50. Then the strike—they shut down for two weeks in July.

Senator NELSON. Your yard did?

Mr. SLOAN. No; the sawmills, the logging and timber interests.

Senator NELSON. That was on account of strikes?

Mr. SLOAN. No; that was before the strikes started. Then when we were ready to start up there was a strike. Portland was favored; that is, the logging people were working and the sawmills were working, but in the Puget Sound district I should say it has delayed the construction plans not less than five months.

Senator NELSON. Owing to the strikes?

Mr. SLOAN. Yes; there is no question in my mind about that at all.

Senator NELSON. Now, you heard the witness that was here just before you?

Mr. SLOAN. Yes, sir.

Senator NELSON. He thought the strike was inspired by the I. W. W.

Mr. SLOAN. I am going to tell you what was said to me. I am a workingman, just the same as you men are. The last Saturday in July a committee of our men in the yard, came in and presented me with a list of their wants. One of them was that carpenters should get $7 a day straight.

Senator NELSON. Ship carpenters?

Mr. SLOAN. Yes, sir. I asked them if it was fair to us or fair to the shipbuilders to pay $7 a day to men that were not capable of earning $3 a day. The chairman of the committee said, "Mr. Sloan, you have got to look at this in a collective manner, not as an individual." "All right." He said, "we will get it; you can pay us." I said, "How do you know I can?" "The Government will reimburse you." I said, "How do you know the Government will reimburse us?" "Why," they said, "our Mr. Sanferson." I says, "Who told Mr. Sanferson?" "Gen. Goethals and Mr. White, and Mr. Sanferson is a very honorable man." "Why," he said, "Mr. Sloan, you know the Government is with us. You know what they did for the railroad boys."

That is practically quoting word for word what the committee of my employees said to me.

Senator NELSON. Did they go on a strike then?

Mr. SLOAN. They struck the last day of July.

Senator NELSON. How many of them?

Mr. SLOAN. All of them walked out of the yard.

Senator NELSON. About how many did you have in the yard?

Mr. SLOAN. I had then, I think, 280 or 290 men working.

Senator NELSON. And they all struck?

The CHAIRMAN. On what ground?

Mr. SLOAN. For an increase in wages. They said they struck because one of the committee was laid off, or something like that. All right. Then they struck again while I was in the East, in the fall, in November.

Senator NELSON. On what grounds?

Mr. SLOAN. They wanted the union scale of wages paid, wanted the yard a union yard, and all that that means, after we had already agreed with the mediation committee to accept their decision and abide by that and pay the increase as of date August 1. However, they struck and went out, I think, 10 days, and returned again. But it took a month or six weeks before we could get the men back again.

Senator NELSON. How much were you delayed because of the strike in the mills and in the woods?

Mr. SLOAN. Including the delay of the timber and everything else, I should say five months.

Senator NELSON. How long did the strikes last in the mills and in the woods?

Mr. SLOAN. They went out in July and I do not think they were all back in October.

Senator NELSON. What was the ground of that strike?

Mr. SLOAN. An increase in wages and eight hours a day. On the contracts for timber that we gave in March there was still timber due in November.

The CHAIRMAN. You say there was delay on account of boilers and engines?

Mr. SLOAN. I have a letter from the Puget Sound machinery depot which is too long to read, but they say it will be 10 weeks on 10 sets of engines and 10 sets of boilers.

(The letter referred to is here printed in full, as follows:)

ENGINE CONTRACT.

PUGET SOUND MACHINERY DEPOT,
Seattle, October 16, 1917.

SLOAN SHIPYARDS CORPORATION, *Seattle.*

GENTLEMEN: In reference to the 1,400 I. H. P. engines which we are building for you to be installed in certain wooden ships which you are building under contract for the United States Shipping Board Emergency Fleet Corporation, please be advised there has been considerable delay in getting this work under way.

So soon as we learned that the Emergency Fleet Corporation expected to have a large number of engines of this size built for their own account, we concluded that it would be much more preferable to build your engines off the same design, as their mechanical equipment in their different vessels would then be uniform.

The information that they were going to have engines built for themselves reached us very shortly after we had received contract from you for engines. About the 1st of July the Emergency Fleet Corporation advised us that they were sending us a set of photstat prints of the engine which they proposed to have built. These arrived

in due time. On July 15 they sent us from Washington revised specifications which certain changes made on a number of drawings. We made provision for our forging and pattern work for constructing your engines and prepared to get this work under way at that time. There were some changes which we desired to make in a few of the engine details and request for these changes was submitted to Mr. Ferris through our Mr. Shafer, who was then in the East, and his approval obtained for most of these minor alterations. During the month of August additional blue prints were sent us, notably on August 14 and 15; additional modifications were made in a letter from them to us under date of August 17; on August 21 we received from them Van Dyke negatives, from which we proceeded to make working sized blue prints, and it was at that time that we proceeded to get the pattern work under way; on August 29 they telegraphed us that an important conference concerning the 1,400 I. H. P. engine would be held in Washington on August 31 and requested that we have a representative attend such conference. This we did not do, but wired them for particulars. On September 1 they telegraphed us to suspend operation on the manufacture of the 1,400 I. H. P. engines which we had under contract for the Emergency Fleet Corporation and letter follows. Letter from them dated September 1 reached us on September 8. They said it had been decided to modify the construction of the engines and we were instructed to stop work in design previously submitted and revised drawings showing the new engine arrangement would be forwarded during the following week.

At the time we received the telegram telling us to suspend work, patterns were approximately 25 per cent completed for the engine according to their original design. Under date of September 6 they forwarded to us two blue prints of the new design engine. These reached us about September 14. Under date of September 15 they sent us 21 different blue prints, but through some error in Washington on the part of the person mailing the blue prints, they were mailed to this company at a New York City address. These blue prints did not finally reach us until the 8th of October; meantime pattern work had been started and forgings ordered. On the 29th of September a general strike was called in all of the shipyards and large contract shops in this city with the exception of Skinner & Eddy plant. Our plant was included among those where the walkout occurred. Our men said at the time to the writer that they were perfectly satisfied with the wages we were paying and the conditions under which they were employed, that they did not want to go out, that they had hoped they would not be ordered, but they finally had been ordered out and had to go.

We might say this in connection we run an open shop; that is to say, we have no dealings with the unions. The majority of our men, however, were members of the union, so that the going out of such a large number closed down our plant. As you are doubtless aware, the strike is still in effect. We are hoping every day that it will be called off.

In the meantime the change in engine design and delay in getting the blue prints of the new engine to us and the walkout have resulted in from 8 to 10 weeks' delay in our engine program. Work on your patterns is now progressing and work on the forgings starting this week. Shop where the forgings are to be made arranged its differences and is operating.

Yours, very truly,

PUGET SOUND MACHINERY DEPOT.
By E. I. GARRETT, *President*.

Senator NELSON. Is that owing to a strike too?

Mr. SLOAN. That is owing to strikes and changes in the specifications; in fact, they had their patterns 25 per cent completed when they were ordered to stop—and changes in blue prints, specifications, and all that.

Senator JONES. Does that letter explain all those things?

Mr. SLOAN. Yes, sir.

Senator JONES. You had better put it in the record.

Mr. SLOAN. There was a lot more I wanted to say but it is getting late.

Senator JONES. I was going to suggest it seems that we can not get through to-night. I suggest that we adjourn now.

The CHAIRMAN. If there is no objection, we will adjourn until to-morrow at 2 o'clock.

(Thereupon, at 5.20 o'clock p. m., the committee adjourned to meet at 2 o'clock p. m. to-morrow, Friday, January 25, 1918.)

UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.

FRIDAY, JANUARY 25, 1918.

UNITED STATES SENATE,
COMMITTEE ON COMMERCE,
Washington, D. C.

The committee met, pursuant to adjournment, at 2 o'clock p. m., Hon. Duncan U. Fletcher, presiding.

Present: Senators Fletcher (chairman), Ransdell, Shields, Nelson, Jones, Harding, and Johnson.

The CHAIRMAN. Mr. Sloan, the committee is now ready for you to continue your statement.

STATEMENT OF MR. PHILIP D. SLOAN, PRESIDENT SLOAN SHIPYARDS CORPORATION, SEATTLE, WASH.—Resumed.

Senator NELSON. Did you bring that option contract with you?

Mr. SLOAN. You wanted the originals, Senator; I have not them with me.

Senator NELSON. Can you give the date of that option contract?

Mr. SLOAN. Yes; I think it was the 12th of April; and the agency agreement was the 21st of April.

Senator NELSON. What do you mean by "agency"?

Mr. SLOAN. Agency. We made them our agents for one year.

Senator NELSON. You made the Clinchfield Co. your agent?

Mr. SLOAN. In New York for one year. That was the 21st of April.

Senator NELSON. And you knew at that time that Mr. Ferris was working for them?

Mr. SLOAN. Yes; because I was then building boats under Mr. Ferris's supervision.

Senator NELSON. For them?

Mr. SLOAN. For them; yes.

Senator NELSON. You stated last night that there were certain things you wanted to go into and explain yourself.

Mr. SLOAN. Yes; I was talking about the delay.

Senator NELSON. And the labor troubles.

Mr. SLOAN. That was the last thing—and changes in blue prints, and things of that kind.

Senator NELSON. Well, have you anything to say on that subject—the delays caused by labor troubles and strikes. I understood that you said that the work was delayed four or five months.

Mr. SLOAN. Yes.

Senator NELSON. By labor troubles?

Mr. SLOAN. Yes; in the lumber camps and the sawmills and our own yard.

The CHAIRMAN. I believe we had reached the point yesterday of dealing with the actual situation out there now?

Mr. SLOAN. Yes, sir; that is what I was taking up.

The CHAIRMAN. There was some suggestion that the Government had taken over the plants, and then I believe we had about reached the positive statement that that was not the case; that although the Government had put a man in charge of the plant, they had not actually commandeered either your plant or the Anacortes plant. Now, what is the situation as to that? You had an agreement with the Shipping Board, whereby they were to put a general manager in there?

Mr. SLOAN. The first agreement I signed—I signed four copies of an agreement drawn by Mr. Stern, who is now present, and sent to our attorney in New York, Charles S. Haight, of the firm of Haight, Sarford & Smith; I signed that agreement on the 28th day of November.

Senator NELSON. Have you that agreement here with you?

Mr. SLOAN. That has all been changed, Senator, since then——

Senator NELSON (interposing). Well, what was that agreement then?

Mr. SLOAN. Practically permitting them to go in——

Senator NELSON (interposing). And take possession of the yards and run them?

Mr. SLOAN. To a certain extent. It was then understood by both Mr. Haight and myself that I was to have something to say in reference to the management of the yard. I knew about all the contracts that had been made, and all the material that was purchased and everything else.

I got home on the 5th day of December. I will read a little later a letter from Mr. Haight to Mr. Stern. After the contracts were signed, and I agreed with the district officer out there, I appointed Mr. Eugene L. McAllister as general manager of the yard. Mr. McAllister had joined our organization, I think it was on the 13th day of October, with the understanding that Mr. McAllister and my brother and myself would make a trio to handle our business, Mr. McAllister looking after the technical end. Under those conditions, Mr. McAllister would have made a brilliant success; we would have made a very great success, due to Mr. McAllister's ability as a technical man.

The CHAIRMAN. What was he; a naval officer?

Mr. SLOAN. A naval architect and engineer. He got his early training under Frank Kirby, whom we all know.

The CHAIRMAN. But he had had no experience in building?

Mr. SLOAN. Not as a practical builder; no, sir. Nor did he want to have.

The CHAIRMAN. Well, he went in at your suggestion?

Mr. SLOAN. Yes.

Senator NELSON. That was under that November agreement?

Mr. SLOAN. Yes.

Senator NELSON. Can you not give us the substance of that November agreement? I do not mean the details; but you can tell the outlines of it.

The CHAIRMAN. What were the main features of it? One thing that it did involve was your retiring from the management, was it not?

Mr. SLOAN. The active management.

The CHAIRMAN. The active management; yes.

Mr. SLOAN. But, as Mr. Haight and I understood, I was to be consulted. And I sat in my Seattle office for five weeks, and the only time I was consulted was when they wanted to remove the Premier Engine Works up to Olympia. We were to give the Premier Engine Works some of the Capital City Iron Works stock. The Capital City Iron Works is owned by the Sloan Shipyards Corporation. And that I could not do. Now, that was the only time that I was consulted.

Senator NELSON. Have you the contract here—the contract of November?

Mr. SLOAN. This [indicating] is the new one which they sent me, which embodies the one of November 28.

Senator NELSON. Is it the same as that?

Mr. SLOAN. No; a great deal of it has been changed, protecting the Clinchfield Co.; and this I absolutely refused to sign. And I will tell you why: When Mr. McAllister was accepted by Capt. Blain, or the district officer, after he had refused to accept him, the first thing he did was to discharge Joseph A. Sloan from the Anacortes plant.

Senator NELSON. Mr. McAllister?

Mr. SLOAN. The next thing he did was to commence discharging from the Olympia plant anybody who could practically give me any report of what was being done. Those that they did not discharge they swore in as employees of the Government.

Senator NELSON. Now, this man McAllister was a man that you had picked out?

Mr. SLOAN. He was doing every single thing that the district officer asked him to do.

Senator NELSON. Who was the district officer?

Mr. SLOAN. Capt. John F. Blain.

The CHAIRMAN. The district officer has been changed since, has he not?

Mr. SLOAN. I do not know; the papers say he has. Then the next thing that they did—Mr. Piper is vice president of our company and is general manager of the Capital City Iron Works. We bought the Capital City Iron Works for one purpose, to place us in a position where we would not depend for machine work on Seattle, Tacoma, and Portland; we wanted some plant of our own, to take care of ourselves in the machine-shop and foundry work. That is why the plant was bought.

The CHAIRMAN. Were you expecting to use that plant for preparing any of the fixtures or equipment for the ships you were to build?

Mr. SLOAN. For building our winches and all of our machine-shop work, and blacksmith work; not building the engines, but building the winches and auxiliary work.

Senator NELSON. And boilers?

Mr. SLOAN. No, not including boilers. And Mr. Piper, according to the figures of the auditor or comptroller in our yard, made, between the 1st day of April and the 1st day of January, a profit of $17,500, besides getting the plant ready. The management of the Capital City Iron Works was reported as being inefficient.

Senator NELSON. Well, that was really a subsidiary company of yours, which was owned by you?

Mr. SLOAN. Yes; it is owned by us exclusively; bought by us on the 14th day of last February.

Mr. Piper's superintendent was Mr. Curry, a man who was considered one of the best engineers on Puget Sound. According to the report that was made he was not good enough for us; but he has since been taken from us.

After Mr. Piper was discharged, he was taken from us by the Erickson Construction Co., that is building 10 boats for the Shipping Board, at a salary of $5,000 a year; and we paid him $250 a month, or $3,000 a year; and he would have stayed if Mr. Piper had remained. He was to install the engines in our yard and do all that class of work. Now we have lost him. He would not work under Mr. McAllister under any consideration whatever. The way the management is going in the Capital City Iron Works, they will break it, in plain English. The management at present has increased the overhead charges of the Sloan Shipyards Corporation at least 100 per cent, if not more.

Senator NELSON. Increase from what?

Mr. SLOAN. From what it was before. They have added—they have got six more people in the office than we had. We had one storekeeper; they have two; and so on down the line in those respects.

The CHAIRMAN. When you complained that you were being excluded from the yard, was that corrected?

Mr. SLOAN. I will get to that later. It was, to a certain extent. But I have no reason to believe anything, unless I have it in writing.

This here agreement [indicating] provided——

Senator NELSON (interposing). That is a proposed agreement which is not signed?

Mr. SLOAN. It was signed, as I understand, by the Shipping Board and by the Clinchfield Navigation Co., and is awaiting my signature.

The CHAIRMAN. Was it approved by your attorney, Mr. Haight?

Mr. SLOAN. I do not think so, because Mr. Haight told me not to sign it unless certain concessions were made. I was told on the 15th of October that if I would sign this agreement [indicating paper in Mr. Sloan's hand], then they would make a supplementary agreement to include what I wanted. Now, the original agreement provided for a bond issue of $500,000.

Senator NELSON. By your company?

Mr. SLOAN. By our company. This agreement [indicating] provides for a $750,000 bond issue.

Senator NELSON. To raise money to——

Mr. SLOAN (interposing). No; as security.

Senator NELSON. Oh, as security.

Mr. SLOAN. For the fulfillment of our contract.

Senator NELSON. The original contract, then, provided that you were to give the Government bonds amounting to $500,000?

Mr. SLOAN. Yes.

Senator NELSON. And this agreement provides for $750,000?

Mr. SLOAN. Yes.

Senator NELSON. And those bonds were to be secured by a mortgage on the plants?

Mr. SLOAN. Yes.

Senator NELSON. Both plants?

Mr. SLOAN. Yes, on the three, the Capital City Iron Works, the Anacortes yard and the Sloan shipyards.

Senator NELSON. Yes. Has the Emergency Fleet Corporation any mortgage now?

Mr. SLOAN. No, sir.

Senator NELSON. They have no security at all, then, for what they have advanced?

Mr. SLOAN. No; only they are in possession, under their original contract.

Senator NELSON. They had a right to go in there and take possession if they found that you were not going on with the work?

Mr. SLOAN. They claim so.

Senator NELSON. Yes.

Mr. SLOAN. But that is easily explained. As my brother explained the other day, there is only one yard that has delivered a boat, and that is only a hull; it is going to be months before they get the machinery in. And they built that not as a Ferris-type boat, but their own type.

Senator NELSON. Where is that yard?

Mr. SLOAN. Grays Harbor; that is the Grays Harbor Motor Ship Co.

Senator NELSON. Yes.

Mr. SLOAN. No steel strapping. Their yard was right adjacent to a mill. I do not know whether they were interested in it, but they made the contract with them for timber.

Senator NELSON. Well, at all events, the Shipping Board has asserted the right under your contract, what they claim to be the right, to take possession of the plant, have they not?

Mr. SLOAN. Yes. But quoting the paper now, Admiral Bowles said they were driving a bargain that they had no right to drive. That is what our papers out home said. But in signing the original contract—and as Mr. Haight's letter says, his letter to Mr. Stern—both of us wanted to do every single thing that could be done to help with our company.

The CHAIRMAN. Your view is that the agreement of November 28 is set aside?

Mr. SLOAN. Oh, yes.

The CHAIRMAN. It is not in operation now?

Mr. SLOAN. It is not in operation at all.

The CHAIRMAN. And another one has been proposed, but has not been executed by you?

Mr. SLOAN. No.

Senator NELSON. Well, that agreement of November 28 you signed, did you not?

Mr. SLOAN. Yes; but they did not sign it; the Clinchfield people nor the Shipping Board did not sign.

Senator NELSON. Well, the Clinchfield Co. have no right to sign it; it was a contract with you.

Mr. SLOAN. No; it was a tripartite agreement. The Clinchfield Navigation Co. wanted protection of their profits that they were making, between the price under the contract and the price at which they sold the boats. Mr. Stern can explain that better than I can.

Senator NELSON. You say they wanted the protection of their prices under the contract?

Mr. SLOAN. Protection of their profits.

Senator NELSON. Well, was not that the difference between what you had agreed to build the ships for and what they got out of the Government for them?

Mr. SLOAN. Less what we talked about yesterday.

Senator NELSON. Yes.

Senator JONES. But they were not known in the contract between you and the Shipping Board, were they?

Mr. SLOAN. No; but they injected themselves into this.

Senator JONES. Were they injected into the November 28 contract?

Mr. SLOAN. To a certain extent, but not like they are now, Senator.

Senator NELSON. Does not that statement of yours imply this—what you said yesterday and to-day?

Mr. SLOAN. What is that?

Senator NELSON. That you really had agreed with the Clinchfield Co. to build those ships at $385,000.

Mr. SLOAN. I told you that yesterday.

Senator NELSON. Yes; and they got $490,000 from the Government for them, and they claim the difference in price?

Mr. SLOAN. No; less what it cost to change those boats to the Ferris type.

Senator NELSON. Well, I know that. That would seem to indicate that the option they had was for $385,000.

Mr. SLOAN. No. We are talking about the first four steamers. There was no price set, Senator——

Senator NELSON (interposing). Well, how could they claim on those other boats, if no price was set, at the same rate as the first four boats?

Mr. SLOAN. According to our agreement, there was no price, to the best of my knowledge; I may be mistaken about that—on the option boats. We were to have them at a price to be agreed upon, but in the contract we made a little later for them to represent us for one year, we agreed to pay them a commission of 5 per cent on business secured for our company.

Senator NELSON. Yes, but you allowed them, less what you called the $50,000 extra expense——

Mr. SLOAN (interposing). That was on the four boats.

Senator NELSON (continuing). You allowed then $100,000 on each boat.

Mr. SLOAN. That was for the first steamers. They had those boats under contract.

Senator NELSON. Yes; but did you not make them the same allowance on the other boats?

Mr. SLOAN. No, sir; all they are getting on the others is 5½ per cent of the $490,000.

Senator NELSON. And that comes out of you at the end, does it not?

Mr. SLOAN. Yes, that comes out of us.

Senator NELSON. Then what business did they have to contract with the Government that you were to pay them——

Mr. SLOAN (interposing). Do you mean for the original contract?

Senator NELSON. No, I mean for the 12 additional ships.

Mr. SLOAN. They had those under option, you understand.

Senator NELSON. And they simply resigned their option?

Mr. SLOAN. Yes.

Senator NELSON. That is all?

Mr. SLOAN. But they would not let go of them unless they received 5½ per cent commission. They would not let go of the four original

steamers unless they received the difference in the cost, or, in other words, $105,000 apiece, unless they got that less what it cost to make the change.

Senator NELSON. In other words, those four boats—none of them were, in fact, started, were they?

Mr. SLOAN. Yes, the keels were laid for two and all the machinery and equipment bought.

Senator NELSON. Now, on those four boats they were to make a profit on each boat of——

Mr. SLOAN (interposing). $105,000, less what it cost to make the change to the Ferris type.

Senator NELSON. And then, as to the others, they were to get 5 per cent?

Mr. SLOAN. Five and one-half per cent.

Senator NELSON. Well, the one-half per cent went to Mr. Ferris?

Mr. SLOAN. As I understood.

Senator NELSON. You understood, then, that Mr. Ferris was to get that?

Mr. SLOAN. They employed Mr. Ferris to design the 16 ships, and what the agreement was, or what their contract with Mr. Ferris was, I do not know anything about that.

Senator NELSON. Did you not know at that time that Mr. Ferris was employed by the Shipping Board?

Mr. SLOAN. He was not at that time, as I understood it, employed by the Shipping Board; his employment came in afterwards.

Senator JONES. Did you make any inquiries then as to whether or not he was employed by the Shipping Board?

Mr. SLOAN. No.

Senator JONES. So you did not know, as a matter of fact, whether he was employed by the Shipping Board then?

Mr. SLOAN. No, I did not.

Senator HARDING. I have not been in touch with this subject. I wish you would make it clear to me, Mr. Sloan, how you could make this change to the Ferris type of ship if Mr. Ferris had not been employed by the Shipping Board. I understood you to say, "less the expense of changing them to the Ferris type of ship." If Mr. Ferris was not employed by the Government, how could there be a "Ferris type?"

Mr. SLOAN. Mr. Ferris was employed by the Government before the 18th day of May, when that contract was signed; but Mr. Ferris designed the first eight boats for the Clinchfield people. Now, the first four boats, you see, were full-power motor ships. Mr. Ferris designed them for the Clinchfield Navigation Co. The next four boats were under contract to the Clinchfield Co.; they were steamers, instead of motor ships, designed also by Theodore E. Ferris.

Senator HARDING. Well, perhaps I am dense; but I have just been noting your testimony of yesterday, and incidentally catching it to-day. You testified that in this profit which was to accrue there was to be deducted the cost——

Mr. SLOAN (interposing). Of making the changes.

Senator HARDING (continuing). Of transferring to the Ferris type.

Mr. SLOAN. Yes.

Senator HARDING. Then how could there be a Ferris type and Mr. Ferris not be employed in making it?

Mr. SLOAN. Mr. Ferris was employed by the Government, you understand, when our contract was signed—not with the Clinchfield Co., but with the Government. The contract with the Clinchfield Co. was signed on the 30th day of March; the contract with the Government, after the Clinchfield people had released the contract for four, and the option on 12 was signed on the 18th day of May.

Now, I do not know for certain, but I think Mr. Ferris entered the employ of the Government the last of April. I do not know whether that is correct or not.

Now, when we come to the price of those boats, as early as the 6th of April, I was negotiating with the Cunard Line for motor ships and steamers, at a price of $480,000. I negotiated with R. M. Calkins, for the sale of the motor ships at $500,000 apiece, and asked him $520,000 apiece for steamers of the same type as the motor ships.

Senator NELSON. You asked all of that; but it did not materialize into any contract, did it?

Mr. SLOAN. I sold the four ships at $500,000 apiece, and I would have closed a contract with R. M. Calkins, had I been free, at $520,000 apiece; and about the 15th of October he called us up and asked prices on 20, and we gave them to him, and asked $570,000 for the same type as we were building for the Government.

Senator NELSON. Who was he?

Mr. SLOAN. Mr. Calkins was general traffic manager of the St. Paul Railway at Seattle. He is now vice president, and has moved to Chicago.

Senator NELSON. Did he buy those for the Government?

Mr. SLOAN. I do not know whom he bought them for. I have been told that he bought them for the Australian Government.

Senator NELSON. Those ships are not completed yet, are they?

Mr. SLOAN. The first two, as shown in that picture which I have handed you—the first one has got the ways under, to launch her.

Senator NELSON. And the others are still in the future?

Mr. SLOAN. The second one should be launched within a few weeks after the first one, and then keep on like that. Government boats will take the place of the ones that are now ready to launch.

Senator NELSON. How many Government boats are there on the ways now?

Mr. SLOAN. Four.

Senator NELSON. In the two yards?

Mr. SLOAN. In the two yards there are eight, I know, and I think there are nine.

Senator NELSON. On the ways?

Mr. SLOAN. On the ways. As soon as the first four boats are launched in our yards at Olympia, then four more Government boats will take their places.

Senator NELSON. And how many at Anacortes?

Mr. SLOAN. My brother explained the other day about that; there are four keels laid, two boats partly in frame, and the fifth keel has not been touched. I understand that they stopped work on that, and are only going to build four there. But my brother explained that day before yesterday to the committee.

Senator NELSON. Now, going back to the situation between you and the Government.

Mr. SLOAN. This contract [indicating] as agreed, and as our attorneys say, puts me in a position where I would be putting up the bonds, guaranteeing the faithful performance of men whom I have absolutely no authority over whatever; they could ruin everything, or they could make a success; if they ruin everything, then I stand all the loss, without having anything to say whatever about it.

Senator NELSON. Now, you have had $1,700,000 out of the Government already, and not a single ship has been completed?

Mr. SLOAN. That is not anything, Senator.

Senator NELSON. Well, is that not true, that you have had over $1,700,000?

Mr. SLOAN. No ship completed, you understand——

Senator NELSON (interposing). Well, is it not true that the Government has advanced you that much?

Mr. SLOAN. Yes, sir.

Senator NELSON. Yes—and no ship completed?

Mr. SLOAN. There could not be one completed with $1,700,000.

Senator NELSON. Oh? That was spent in getting the equipment and in building the yards?

Mr. SLOAN. A great deal of that was spent for machinery, advance payments on machinery; advance payments on timber; advance payments on iron.

Senator HARDING. Was any of it spent for commissions?

Mr. SLOAN. As I explained to the Senators yesterday——

Senator HARDING. I beg your pardon; I did not know that.

Mr. SLOAN. That is all right. The Clinchfield people advanced $154,000 on the first four boats. That was the contract signed on March 30. The understanding, when they released their contracts to the Government was that that $154,000 would be returned. That was returned. There was $167,000 in addition to that, paid them as their proportionate share of the profits accruing to them on the sale of the boats.

Senator NELSON. Those four?

Mr. SLOAN. Well, yes.

Senator HARDING. Well, is it the practice to pay that profit before the completion of the contract?

Mr. SLOAN. In the commercial work outside of the Government, yes. Now, in answer to Senator Nelson's question, where they injected themselves in this was so that they would not interfere with the Shipping Board in any way in the payments, in all commercial work outside of the Government work, where any contracts have been secured for a shipyard by outside people and a commission is being paid, it is prorated as each payment is made to the builder. Now, to get away from the payment to the Clinchfield Co. until all the boats were completed, they came into this tripartite agreement.

Senator NELSON. That has not been signed?

Mr. SLOAN. Not by me; it was signed by them and the Shipping Board people.

Senator NELSON. What does that contemplate—that they are to get all the commission now at one "leak"?

Mr. SLOAN. When the Government's boats are entirely completed.

The CHAIRMAN. That subordinates their claim to the Fleet Corporation?

Mr. SLOAN. To the Government; yes.

The CHAIRMAN. They are not paid until the Fleet Corporation—

Mr. SLOAN (interposing). Is through.

The CHAIRMAN. Until it gets its ships?

Mr. SLOAN. Yes; gets its ships.

The CHAIRMAN. Well, you have no objection to that, have you?

Mr. SLOAN. The way—yes.

The CHAIRMAN. Do you object to their subordinating their claim to the Fleet Corporation's claim?

Mr. SLOAN. Oh, no; the Clinchfield people should not get their money until the last boat is delivered to the Government. But I do object to putting my neck in the halter; throwing it over a limb, as it were, with the rope in the hands of somebody else.

Senator NELSON. But you have not put in any of your own money for those ships?

Mr. SLOAN. I have put in money that I sweat blood for—well, I will not use that expression—money that I made myself, Senator. I figure that I put into my company $125,000 in cash.

Senator NELSON. Well, what has been done with that?

Mr. SLOAN. That is there.

Senator NELSON. In the plant?

Mr. SLOAN. Working capital.

Senator NELSON. It is in the plant; you have got the plant there, have you not?

Mr. SLOAN. Yes.

Senator NELSON. And at Anacortes, too?

Mr. SLOAN. Yes; but if things continue to go as they are going to-day, I would not give a 5-cent piece for the Anacortes yard.

Senator NELSON. And you are continuing to get a salary of $10,000 a year?

Mr. SLOAN. Yes; I am.

Senator NELSON. And the Government is to see that you get that?

Mr. SLOAN. The Government has taken the business of a solvent company.

Senator NELSON. Of what?

Mr. SLOAN. Of a solvent company. We discounted every single one of our bills, from the day we started business up to and including the 10th day of October.

Senator NELSON. There was no trouble about discounting them when the Government furnished you most of the money.

Mr. SLOAN. Now, as payments came due, you understand, with 6 boats under construction at Anacortes, or 8 boats which we intended to put there, and 4, making 12, if the period payments coming due were met promptly by the Government it would have given us a great deal more money than we could have possibly paid out on all the bills coming due.

Senator NELSON. Did not the Government call time on you and take possession of your plant because you were not making progress fast enough? Was not that the theory that the Shipping Board acted on?

Mr. SLOAN. The Shipping Board acted on this theory. I was up against exactly the same proposition that the other yards were, but the other yards were not interfered with. I was.

Senator NELSON. That does not answer my question; you shoulder it off on to somebody else. I asked if the Shipping Board or Emer-

gency Fleet Corporation did not claim the right to take over this business because you failed to make the speed you were to make under the contract?

Mr. SLOAN. Yes, sir.

Senator NELSON. And that they had not much hope of your being able, at the rate you were going, to complete the work? Was not that the claim of the Shipping Board?

Mr. SLOAN. Yes, sir.

Senator NELSON. That is it. That is what I was trying to get at.

Mr. SLOAN. Senator, why then——

Senator NELSON. And if they acted on that theory, how would you expect them to make this third payment? You are really not entitled to it, because you have not made speed.

Mr. SLOAN. The contract specified when the boat was half in frame, and when the boat was all in frame and the keelsons in. All right; I did not ask for any payments until that period of construction had been reached. Now, why make an example of me when the other yards are going to be away behind and are behind now?

Senator NELSON. That may be so, but you admit that you are behind.

Mr. SLOAN. I am, yes. I put in a letter yesterday showing that I am delayed 10 weeks on engines. Am I to blame for that?

Senator HARDING. Did the Shipping Board approve of this prepayment proposition that you made with the Clinchfield people?

Mr. SLOAN. No; they knew nothing about that, Senator.

Senator HARDING. Did not dissipation of these funds in advance of delivery, or the misappropriation of these funds, if I may say that without involving any questionable deal——

Mr. SLOAN. You can say anything to me you want to, Senator. That is what I am here for.

Senator HARDING. Do you not believe that the taking of your yards was due in part to the fact that you had taken this advance money and made your settlement with the Clinchfield people when normal business would have justified holding that off until the contract was completed?

Mr. SLOAN. If I asked the Clinchfield people to do that, the Government would never have gotten the 16 ships, unless they were commandeered.

Senator NELSON. When did you say that option contract was made with the Clinchfield people?

Mr. SLOAN. I think it was the 12th of April; I am not certain of that. I signed the contract for the four on the 30th of March, and I believe that that contract for the option on 12 was dated the 12th of April.

Senator NELSON. It was dated ahead of time, then? It was not dated the day it was really signed, then?

Mr. SLOAN. You mean——

Senator NELSON. When was the option contract that you speak of, which you have not produced yet, signed and executed?

Mr. SLOAN. It was executed, I think, the 12th day of April; that was for the 12 boats.

Senator NELSON. Was not that option contract dated back?

Mr. SLOAN. No, sir.

Senator NELSON. Was that the correct date?

Mr. SLOAN. Yes, sir; as nearly as I can remember.

Senator NELSON. Now, tell me this: Did not the Clinchfield Co. get that option contract for the purpose of working the Government?

Mr. SLOAN. No, sir.

Senator NELSON. Did they not claim that they got that option contract from you, and that it would be a good thing to work the Government to get a big price for those 12 boats?

Mr. SLOAN. No, sir; when I have got to do that, I quit the business. I believe I signed that option on the 12th day of April. I think it was the same day I closed the contract with the Duluth Iron Works for two sets of engines. I know it was before the 21st of April, because that was the date I signed the agreement with them to act as our agent for one year.

Senator NELSON. Where did you sign it? In New York?

Mr. SLOAN. Yes, sir; in the Clinchfield office. I left New York for home, I think it was, the 27th day of April.

Senator NELSON. But you said yesterday that until you made this contract you had never seen those people before—the Shipping Board. You had not had any communication with them except through the Clinchfield Co.?

Mr. SLOAN. No, sir; I was not in Washington from December 26, 1916, until the 23d day of October, 1917. I knew nothing about the wording of our contract at all until I received the contract one week after it was signed.

The CHAIRMAN. What was the date of the contract to you?

Mr. SLOAN. With the Government? The 18th day of May.

The CHAIRMAN. 1917?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. You had the contract and were working under that contract, but you had never been to Washington or conferred with the board until October, 1917?

Mr. SLOAN. No, sir; that contract was signed by Mr. Leroy Richards.

The CHAIRMAN. It was negotiated through the Clinchfield Co.?

Mr. SLOAN. By Mr. Barnett.

The CHAIRMAN. What was his connection with the Clinchfield Co.?

Mr. SLOAN. Vice president.

The CHAIRMAN. Is he still vice president?

Mr. SLOAN. As far as I know.

Senator NELSON. What is he? A New Yorker?

Mr. SLOAN. That I could not tell you.

Senator NELSON. He is not a man that used to be up in Alaska, is he?

Mr. SLOAN. No; this man, Mr. Barnett, used to be with the Guggenheim people as manager of their coal business. That is, he told me that. Aside from that, I know nothing about him whatever.

The CHAIRMAN. This agreement you made November 28, you signed?

Mr. SLOAN. Yes.

The CHAIRMAN. And it went into operation, as I understand it, and you gave up the general management there, and Mr. McAllister went in in your place? How does it come you wanted to change that? Was it at your request the changes were proposed?

Mr. SLOAN. Let me say this: This [producing a letter] will explain. [Reading:]

HAIGHT, SANFORD & SMITH,
New York, November 28, 1917.

CARL S. STERN, Esq.,
Assistant Counsel, Emergency Fleet Corporation,
Washington, D. C.

MY DEAR MR. STERN: Mr. Sloan has signed the contract prepared by you, with the addition to Article XI, suggested by me over the telephone. There were various provisions in the contract which caused him to pause, but his final decision to sign without other changes was due to the thought which is present in his mind as well as in mine—that you are looking only for the proper protection of the Government interests, and that protection he wants you to have. For that reason. both of us preferred to accept the agreement precisely as you drew it, practically in its entirety.

It may, however, be helpful if I refer to one or two points, upon which I believe the construction is quite clear but about which I wish to be perfectly sure that there shall be no future difference.

1. There are several references throughout the contract to the effect that things are to be done with the "approval of the owner." It is my understanding that your inspector or your auditor out at the yard will be authorized to grant his approval, and that such questions will not have to be referred to Washington for decision. The necessity for such a reference would, of course, occupy so much time as to prove a very distinct hindrance.

2. On page 7, in Article VI, subdivision (c), it is provided that Mr. Sloan shall, "until the completion of the Fleet Corporation and the Calkins vessels, retire from the executive management of the plants at Olympia and Anacortes," etc. Mr. Sloan proposes, immediately upon his return to Seattle, to have Mr. Eugene L. McAllister elected as vice president and general manager of both yards. He will turn over to Mr. McAllister the entire authority in connection with the construction of the vessels, and in every way live up to the offer which he made to give the Fleet Corporation control over the execution of the work. He understands, however, and so do I, that it is expected that he will cooperate as much as he can in any work that will expedite the delivery of the vessels, and in particular he proposes to push the negotiations for the purchase and quick delivery of such lumber as is not yet contracted for. It is understood, however, that no contracts are to be signed by Mr. Sloan or by anybody else until they are first approved by your representative in the yard.

Mr. Sloan has not overlooked the fact that your contract throughout binds him until the last one of your 16 ships is finished, although before that particular boat slides off the ways the interest of the Fleet Corporation in the output of his yard will have reached almost the vanishing point. We both feel, however, that all such questions may well await consideration until a later date, when we shall all of us know the extent to which Mr. Sloan has succeeded in constructing your vessels and making for his own company the substantial profit which he now contemplates.

Mr. Barnett tells me this morning that it will be impossible for him to call a meeting of the board of directors until Monday or Tuesday of next week. I had a tentative appointment with him to discuss the matter this morning, but Mr. Barnett did not feel that there would be any good purpose served by a conference at the present time.

Under these circumstances, it is impracticable for Mr. Sloan to remain in New York longer, and, indeed, it seems to me important, for your interests as well as his, that he get back to the yards as fast as possible. He has accordingly left three copies of the contract, signed by him as president, in my hands (he has also signed the fourth copy, which is now in the possession of Mr. Barnett). I will either hold the three copies until it is decided whether or not the Clinchfield Co. will sign, or I will return the copies to you immediately, as you wish.

Mr. Barnett intimated that he would want some change in the contract for his better protection, but did not go at all into details, so that I have no idea as to what change will be requested by him.

Very truly, yours,

CHARLES S. HAIGHT.

Senator NELSON. Did Mr. Barnett sign that contract?

Mr. SLOAN. Mr. Barnett did not sign it.

Senator NELSON. Did the Shipping Board sign it?

Mr. SLOAN. No.

Senator NELSON. That is the contract of November 28?

Mr. SLOAN. Yes; I signed it. This is the new one they wanted me to sign.

Senator NELSON. This is the new one?

Mr. SLOAN. Yes. If this contract had been signed——

Senator NELSON. Was that new contract that you signed to be delivered to the Shipping Board?

Mr. SLOAN. That I do not know. Mr. Stern could answer that.

The CHAIRMAN. Does not the contract of November 28 contain the matters that you object to now in the new contract?

Mr. SLOAN. The other one called for a bond issue of $500,000; this calls for a bond issue of $750,000.

Senator NELSON. Is not that because the Government was out more by that time than it was before?

Mr. SLOAN. No; it was not on account of that at all. It was for the simple reason that the work is progressing faster and the Government is protected as the work advances in the manufacture of engines, boilers, and everything else. Their interest appears as each payment is made, under maritime law. Now, after I got home I found the conditions a great deal different from what I expected to find them. I would not have signed the contract of November 28 if I had known the conditions that were existing in Anacortes and Olympia.

Senator NELSON. What were those conditions?

Mr. SLOAN. We were practically ruined, as Admiral Rogers stated in the presence of Mr. Dwight and Mr. Stern and Mr. Barnett and myself—that we would be if certain actions were taken by the Shipping Board.

Senator NELSON. That you would be ruined?

Mr. SLOAN. Ruined; that our credit would be absolutely ruined. He said that he knew conditions out there and knew what would happen.

Senator JONES. What were those things that he referred to?

Mr. SLOAN. That if certain things could be kept quiet——

Senator JONES. You say "certain things"; state what they were.

Mr. SLOAN. Making a joint checking account between the Sloan Shipyards Corporation and the Government. I believe that was the only one.

Senator NELSON. They claimed that if that was done it would ruin you?

Mr. SLOAN. Yes; that the credit of the Sloan Shipyards Corporation would be absolutely ruined. Now, I am ready and my brother is ready to do every single thing that we can do to help the Government, Senator—everything. But I do not want to see our business absolutely ruined and taken from us without some chance to come back.

Senator NELSON. Well, you have those shipyards that you never had before?

Mr. SLOAN. Senator, those shipyards, you understand, would not be ours if things go on the same as they are going on now, for the simple reason that every bit of profit in the work would be wiped out and a loss shown. The shipbuilding business is entirely different from any other line of business you can think of.

Senator NELSON. Yes; but you have a right to assume that shipbuilding will continue out on the coast, and the Government has helped you to build two fine yards, one at Olympia and the other at

Anacortes, and you will have those yards after you build these Government ships.

Mr. SLOAN. I will not, Senator.

Senator NELSON. Why not?

Mr. SLOAN. If our affairs are carried on the same as they are to-day, for the simple reason that the boats will not be completed for the contract price, and the profit will be wiped out and there will be a debt on the plants. So the Clinchfield Co. or the Government would have our business, and we would be out. Then I would not have any plant, would I?

Senator HARDING. You paid the Clinchfield people off, did you not?

Mr. SLOAN. No; not in full. The Clinchfield Co. will owe us; they owe us now $200,000. That is, they owe me, and I turned over to the company $100,000, as I explained yesterday. There is a question about that. But they owed the difference, or will owe the difference, when the first four boats are completed, between their original contract with us at $385,000, and what it costs to change those boats to conform to the Ferris plan for the Government. I explained the difference yesterday.

Senator HARDING. Will you clear one thing up for me?

Mr. SLOAN. Yes, sir.

Senator HARDING. You were complaining a moment ago that you were embarrassed by the Government's failure to make payments according to agreements.

Mr. SLOAN. Yes, sir.

Senator HARDING. I am reading your testimony here, wherein you confirmed the statement that you were advanced $1,724,800——

Mr. SLOAN. Yes, sir.

Senator HARDING. At the end of 60 days, irrespective of the progress of any vessels.

Mr. SLOAN. Yes, sir; but obligated for machinery, equipment, material, and stuff of that kind. Now, the report made by the auditor, which is on file over at the Shipping Board—I will put a copy of it on file.

Senator JONES. I think it is in the record already. It is the report of the auditor, is it not?

Mr. SLOAN. Yes; that shows that every one of our commitments and contracts was verified before the payments were made. They were verified by the resident auditor in Seattle, and I think they amounted to $2,500,000. That was according to the contract. Then the next payment that would be due, Senator, would be at a certain date of construction; it would be when the boat was half in frame. The contract says—and I told Mr. Stern and Mr. White that had I been there I would not have signed the contract with this clause in it—that no payment will be had until it is represented by the amount of work done on the ships and the amount of material in the yard pertaining to that ship and paid for. But that does not take into consideration the amount of advanced payments that were made on machinery which is a part of your boat.

Senator NELSON. And that equipment and machinery is included in the $1,700,000 advanced by the Government?

Mr. SLOAN. Yes; but then you make further payments, too, Senator.

Senator HARDING. I was going to ask you if the industrial conditions are such that you must pay for machinery in advance of delivery?

Mr. SLOAN. Yes, sir.

Senator HARDING. How long has that been the condition?

Mr. SLOAN. You have to make your advance payments, not the full price of the contract but a certain percentage of the amount of your contract, or you would never get any material. I was criticized by one paper because I had contracted for machinery and equipment for boats that were not even started. Now, as soon as your contract is signed for any ship, unless you immediately contract for your engines, boilers, and auxiliary equipment and the other material that is going into the construction of that boat, you will lose out.

Senator HARDING. Well, now, let us take this up.

Mr. SLOAN. All right.

Senator HARDING. We will say a boat is to cost $480,000.

Mr. SLOAN. Yes.

Senator HARDING. What percentage of that cost is machinery?

Mr. SLOAN. The machinery, equipment, auxiliaries, and all that would amount to close to $190,000. That is, installation and everything.

Senator HARDING. I am just speaking of the cost of machinery.

Mr. SLOAN. The engines would cost you to-day approximately $76,000; that is, taking the Ferris type. The boilers would cost you approximately, well, in the neighborhood of $35,000. The pumps, condensers, and everything like that would amount to approximately $30,000.

Senator HARDING. That is $140,000?

Mr. SLOAN. Yes. Then your piping would cost approximately, offhand I would say, $7,500.

Senator HARDING. This is uninstalled?

Mr. SLOAN. Uninstalled; yes. I would say that the piping and everything would cost in the neighborhood of $160,000.

Senator HARDING. In round numbers, one-third of the ship?

Mr. SLOAN. Yes.

Senator HARDING. Now, what advance payment are you obliged to make on that?

Mr. SLOAN. Take the Puget Sound Machinery Depot Co. I gave them a contract for 10 engines——

Senator NELSON. That is your own company?

Mr. SLOAN. No; the Puget Sound Machinery Depot Co., of Seattle. They built quite a number of engines for the Skinner & Eddy Co. I gave them a contract for 10 sets of engines and 10 sets of boilers, and I paid them the same as I got; that is, 11 per cent in 30 days and 11 per cent in 60 days.

Now, on winches from the Washington Iron Works I paid 25 per cent. On the contract for pumps, heaters, and evaporators, with the Kern Machinery Co., of Detroit, I paid 50 per cent. They were absolutely responsible, and they had to make advance payments on the steel and other material that they had to have. They got 50 per cent. I paid the Alma Boiler Co. in one instance 30 per cent as an advance payment on some boilers.

Senator HARDING. You mean that the steel concerns of this country require advance payments from reputable concerns?

Mr. SLOAN. I can not tell you that. All I am telling you is what I did and what I know the other shipyards are doing. In some instances I only had to pay 10 per cent. Take the Pacific Machine & Manufacturing Co. We pay them 10 per cent, and then we pay them every month as the work progresses. There have been contracts let by private concerns for ships where 25 per cent of the contract price was paid when the contract was signed, and I asked that also—I will be frank—before the Government contract was signed, and that payments be made every 30 days, regardless of what condition the work was in.

Senator HARDING. Now, then, just apply a little arithmetic to this, please.

Mr. SLOAN. All right.

Senator HARDING. Assuming that you pay even so much as the Government advances you, namely, 22 per cent.

Mr. SLOAN. Yes.

Senator HARDING. You would be expecting only 22 per cent of 33⅓ per cent of the advance, because we have reached the conclusion that these things cost only 33⅓ per cent of the whole ship, and if you paid the same proportion of advance you would have to advance only 22 per cent of one-third of the cost of the ship.

Mr. SLOAN. I only got 22 per cent.

Senator HARDING. I know; you get 22 per cent of the whole, do you not?

Mr. SLOAN. Well, now here, how about your timber and your iron?

Senator HARDING. Just omit that for the moment. You are getting 22 per cent on the entire cost of the ship—labor, material, and profit.

Mr. SLOAN. All right.

Senator HARDING. Now, your advance payments for machinery, on your statement, would only be 33⅓ per cent of the whole cost of the ship. Am I right?

Mr. SLOAN. All right.

Senator HARDING. You say, about $160,000?

Mr. SLOAN. All right.

Senator HARDING. Then you are only paying them 22 per cent advance on one-third of the cost of the ship in actual outlay, so that you ought to have abundant funds to go on with your labor and profits.

Mr. SLOAN. Senator, say it takes 33⅓ per cent; that would be one-third then of the entire amount that I am to receive for the 16 ships.

Senator HARDING. I quite agree with that, but you do not pay the advance except as you get it, you say?

Mr. SLOAN. All right. Now, in some cases I paid 50 per cent.

Senator HARDING. And in other cases only 10 per cent.

Mr. SLOAN. Those were for smaller things. But how about the current expenses of the yards, the running expenses, the buying of timber, the buying of oakum, the buying of iron, and everything that enters into the construction of ships other than equipment? There are a thousand and one things.

Senator HARDING. In a general way, I should think you were in a very advantageous position as to labor and profit with respect to the Government.

Mr. SLOAN. Well, how would it have been if the payments stopped? When the payments were stopped by the Government the payments on the Calkins contract stopped.

Senator NELSON. Yes. But, Mr. Sloan, when the Government took it over they would pay for this material, would they not?

Mr. SLOAN. Yes; but the payments were stopped before that, Senator. Now the Government is paying for everything.

Senator NELSON. They are paying for everything?

Mr. SLOAN. Yes.

Senator NELSON. Carrying out your contract?

Mr. SLOAN. Yes.

Senator NELSON. That is what I mean. They are carrying out your contract for material?

Mr. SLOAN. Yes; as far as I am able to learn.

Senator NELSON. I suppose they would have to do that or they could not get the stuff. So they are simply carrying out what you claim you arranged for?

Mr. SLOAN. Yes; they are carrying out all that; and we bought some material very cheap. We bought, for instance, iron at from $3.50 to $4 a hundred.

Senator NELSON. So that all you are out on this is what you have advanced on these contracts; that is, for your company, before the Government took possession?

Mr. SLOAN. Yes.

Senator NELSON. That is all you are out on that?

Mr. SLOAN. What we would be out, Senator, is the loss due to inefficient management between now and the time of completion of the ships, which the district officer of the Shipping Board has accused me of; and I am willing to submit these photographs that I have already given to show what I have accomplished, to prove whether I was inefficient or not.

Senator HARDING. Do you not think it would have been a rather more prudent business policy not to have dissipated your funds in the distribution of profits until you had earned them?

Mr. SLOAN. You could only say I had dissipated $167,000 to pay off the Clinchfield Navigation Co.

Senator HARDING. I read it $300,000.

Mr. SLOAN. $317,000; $154,000 of that was theirs, because they had already advanced that. The contract, Senator, was theirs.

Senator HARDING. Had they advanced it for building yards or building ships?

Mr. SLOAN. For building ships. We started building our yard on the 27th or 29th day of January. We would have gone on just the same if the contract with the Government had never been signed, and I did not want the Government work, as I said yesterday, until Mr. Ferris asked me—I won't say he pleaded—he asked me to build some boats on his plans, on account of the fact that we were building our boats on his plans, the motor ships, and the boats are almost the same.

Senator HARDING. Do you think you could have more profitably pursued your private way in building?

Mr. SLOAN. Well, any shipbuilder will tell you yes.

Senators, I want to get in your minds, if I am able, the relationship between the Clinchfield and myself on those contracts. I want to

get clear the fact that I knew nothing about the negotiations—that is, the wording or anything else of the contract—until after the contract was signed. I want to get clear the fact that the price, $490,000, was not out of the way, because I had asked that, and at the same time the Standifer Co. of Portland was given a contract, I believe, for the same price. Since that time the Meacham & Babcock Co. of Seattle has received a contract from the Shipping Board for the Ferris type of boat for $555,000, $65,000 more than our price.

Senator NELSON. Yes; but in those cases they did not build ship yards for them as they did in your case, did they?

Mr. SLOAN. As I understand, some of the Shipping Board's new rules provide that none of the first payments shall be used for the construction of plants.

Senator NELSON. Let me ask you this question, to clear it up in my own mind: The Government advanced you, as I understand, $1,700,000 for your equipment?

Mr. SLOAN. Yes, sir.

Senator NELSON. And the price of the ships was $490,000?

Mr. SLOAN. Yes.

Senator NELSON. Now, was that cost of the yard to be deducted from the price you were to get for the ships, so that the Government was to pay you $490,000 for each ship and in addition to that to build the yards for you?

Mr. SLOAN. Senator, our yard was built. We had six vessels in our yard.

Senator NELSON. The Anacortes yard was not started?

Mr. SLOAN. It was not then.

Senator NELSON. That was a part of it. You spent a part of this money for the Anacortes yard?

Mr. SLOAN. We gave the Anacortes Co. a contract. Would it have been any different if we had added to our yard at Olympia, or built a new yard where we would have been closer to the timber and had a new labor market to draw from than it would be to handicap the yard at Olympia with additional ways and additional expense and not get any results?

Senator NELSON. You can figure it out as you have a mind to. You got $1,700,000 that you expended for your equipment in the yards, etc., and in addition to that, if your contract went on to completion, you would get $490,000 for each ship. So that in order to find what those ships cost you would have to figure in that advance money on the price of the ship, because it would not be deducted from it.

Senator JONES. Senator, I think you are mistaken about that. The $1,700,000, as I understand it, was advanced as a part of this contract price of $490,000.

Senator NELSON. Oh, no; it was an advance on the shipyards.

Mr. SLOAN. No, Senator.

Senator NELSON. I asked you if it was to be deducted from the price. I asked if any part of this money that was advanced was to be deducted from the price you were to get for each ship.

Mr. SLOAN. Oh, yes; I misunderstood you.

Senator NELSON. There is where you got me on the wrong track.

Mr. SLOAN. The $1,724,800—correct figure—is the first two payments on the 16 ships.

Senator NELSON. At $490,000?

Mr. SLOAN. At $490,000.

Senator NELSON. So it really is to be deducted from it?

Mr. SLOAN. Yes.

Senator NELSON. That is what I mean, but you mislead me at first. I suppose you misunderstood me.

Mr. SLOAN. I did.

The CHAIRMAN. The contract required these payments to be made within a certain time, but they were not based on a certain stage of completion of the work?

Mr. SLOAN. Only the commitments and money paid for machinery, boilers, engines, and things of that kind that go into the ships.

The CHAIRMAN. When were you there last, Mr. Sloan?

Mr. SLOAN. I left home a week ago last night. You asked me the question in the beginning if the bar, we will call it, was not raised from my going to the yard. After I protested the district officer received a telegram authorizing him to permit me to visit the yard, both yards, any time that I wanted to, to go over the accounts, to see the contracts, and everything else, but I had nothing to say, nor did I interfere with anybody. But Mr. McAllister followed me out into the yard and made this statement: "You are getting me in bad." I said, "How?" and he said, "I have authority not to permit anybody to come into this yard, and it was understood that you would only come into the office." And that was in our own yard at Olympia.

The CHAIRMAN. When was that?

Mr. SLOAN. A week ago last Tuesday.

The CHAIRMAN. You saw what was going on and the stage of the work there then?

Mr. SLOAN. Yes.

The CHAIRMAN. What is it now?

Mr. SLOAN. It is shown in these pictures [exhibiting photographs]. These pictures were taken last Friday.

The CHAIRMAN. Please state that in a general way, because we can not put those pictures in the record.

Mr. SLOAN. I will look at these and tell you. The first boat of the eight in the Olympia yard, they were putting under it the launchways. The pilot house was completed, and they were working on the cabin on the poop deck.

The second boat was planked; they were calking it and working on the pilot house.

The CHAIRMAN. Were those Government boats?

Mr. SLOAN. No; I am going to go right down. You mean then?

The CHAIRMAN. Yes.

Mr. SLOAN. The Government boats take their places immediately they are launched. The first Government boat was all in frame and the floors ceiled. The second Government boat was all in frame and ceiling started. On the third Government boat the forward cants and the after cants were not up, but they were putting in the keelsons. The fourth Government boat was framed to the forward and after cants, and they had, I believe, started to put in the keelsons.

At the Anacortes yard there were two boats half in frame, and the fifth keel ready to lay. All the equipment, engines, boilers, and everything else, was under construction, and some of the boilers in the yard at Olympia.

The CHAIRMAN. They were going right on with the work?

Mr. SLOAN. Yes, sir.

The CHAIRMAN. Was the whole force on?

Mr. SLOAN. There were 610 men working.

The CHAIRMAN. In both yards?

Mr. SLOAN. No; in the Olympia yard.

The CHAIRMAN. How many of those were engaged on work not Government work?

Mr. SLOAN. I should say possibly half. They were working hard to get the first boats out of the way so that the Government boats could take their places.

The CHAIRMAN. Then you have got to complete this other work before you can put your full force on the Government work?

Mr. SLOAN. Well, the heavy work on the first four boats is about completed, and that means that all the ships carpenters and fasteners and men like those will go on Government work. In fact, they are on it now.

The CHAIRMAN. Is that all the force you could profitably employ?

Mr. SLOAN. No; they are adding to that right along. When the men struck in the first week of November, we had 510 men working, adding all the time as the timber commenced to come in faster.

The CHAIRMAN. Are you utilizing now all the men you could profitably work on the yard?

Mr. SLOAN. No. At the Olympia yard our intentions were to work two shifts, and get in as many men as we possibly could.

The CHAIRMAN. How many more men could you use?

Mr. SLOAN. We could work in there at least 200 more men.

The CHAIRMAN. Can you get them?

Mr. SLOAN. We gradually pick them up. The Olympia yard, on account of being all plank, is absolutely clean, so there is no mud or dirt or anything else, and men prefer working in that yard under similar conditions to working in other yards. But I should say 800 men would be the limit we would work in Olympia.

The CHAIRMAN. How many men are working at Anacortes?

Mr. SLOAN. When my brother was let out, I think there were 160.

The CHAIRMAN. I mean now?

Mr. SLOAN. That I could not answer; I do not know anything about it.

Senator NELSON. Is that yard there on tidewater flats too?

Mr. SLOAN. No; it is on solid ground, sir. The Chamber of Commerce of Olympia has already had up for some time the dredging of the channel that surrounds the plant at Olympia. In dredging out the channel all the dirt that is dredged out will fill in under our yard and the balance of the tide flats. Senator Jones can explain how that is done.

Senator NELSON. You have stated what has been done on these Government ships up to this time. How does that compare with the time provided in the original contract?

Mr. SLOAN. As I stated yesterday, we will be five months late, due to delays caused by strikes and delay in delivery of engines and other things like that, Senator.

Senator NELSON. So that these boats will be five months behind the time they ought to have been completed under the original contract?

Mr. SLOAN. Yes, Senator.

Senator NELSON. And that delay was the ground on which the Emergency Fleet Corporation wanted to take over the property?

Mr. SLOAN. Yes, sir.

Senator NELSON. And the original contract provided for that, did it not?

Mr. SLOAN. Yes, sir.

Senator NELSON. So that they have exercised that option under your contract?

Mr. SLOAN. Yes, sir.

Senator NELSON. And they are in possession now and carrying it on?

Mr. SLOAN. Yes, sir.

Senator NELSON. Now, what is your grievance against the Emergency Fleet Corporation under the present conditions, if any? I am not assuming that you have any.

Mr. SLOAN. I want you, Senator, to ask me any question, whether it is personal or otherwise. I want to get clear in your mind exactly what I want to convey to you. My grievance is this, that if affairs in connection with the Anacortes yard, the Sloan yard, and the Capital City Iron Works are permitted to go on as they are going on now, under the supervision of the men that are now in control, every dollar's worth of assets will be wiped out and indebtedness incurred.

Senator NELSON. You think it will cost the Government more to complete your contracts than it would have cost had you done it?

Mr. SLOAN. I know it will.

Senator NELSON. In what respect will it cost the Government more?

Mr. SLOAN. For the same reason that the only man that can build a boat to-day and build it cheaply is the man who knows how to build them.

Senator NELSON. Have they not got this expert there that you picked out?

Mr. SLOAN. Senator, he is not a shipbuilder; he is a technical man.

Senator NELSON. You picked him out?

Mr. SLOAN. Yes; but when I picked him out I supposed that he was to work in conjunction with my brother and myself. My brother and I have been eliminated, but they have since tried to get him back again.

Senator NELSON. Your brother?

Mr. SLOAN. Yes.

Senator NELSON. Well, in what respect do you think it will cost the Government more? Do they have to pay more for material than you have paid?

Mr. SLOAN. They are going to pay a great deal more for timber, possibly $50 or $60.

Senator NELSON. They have taken over these contracts where you had made prepayments?

Mr. SLOAN. We made one contract for 10,000,000 feet of timber, and we made an advance of $100,000 on that.

Senator NELSON. They have taken that over?

Mr. SLOAN. Well, there is 20,000,000 feet besides that.

Senator NELSON. But you had no option on that?

Mr. SLOAN. No; I had not, Senator.

Senator NELSON. So that you could not tell any more than the Government what you would have to pay for that?

Mr. SLOAN. No, I grant that; but there are a great many ways in running a business for leakage to occur.

Senator NELSON. What about wages? Is the Government paying higher wages than you were paying?

Mr. SLOAN. Our contract provides that the Government will reimburse us for the advance in wages.

Senator NELSON. So that there will be no loss on that score?

Mr. SLOAN. There is no loss on the wage score.

Senator NELSON. And they have employed a little extra office force there, you say?

Mr. SLOAN. A great deal. But you take 600 men working, and if those 600 men are not all up to the highest point of efficiency it costs a whole lot of money, doesn't it?

Senator NELSON. Yes.

Mr. SLOAN. I will tell you what I did. I did this voluntarily. I offered the men in our yard a dividend of 7 per cent on the wages they would earn during the year, to get increased efficiency.

Senator NELSON. Were they union men that you employed in the yard?

Mr. SLOAN. Union and nonunion.

Senator NELSON. You run what they call an open shop?

Mr. SLOAN. Yes.

Senator NELSON. How is the Government running it now?

Mr. SLOAN. Just the same, I believe; but I understood that the men in the Capital City Iron Works were talking about going out; they were dissatisfied. I was also told that the men in the shipyard got dissatisfied.

Senator NELSON. Are you building these ships from green timber, or is it dry?

Mr. SLOAN. No; that timber is green, Senator.

Senator NELSON. You are building these ships of green timber?

Mr. SLOAN. Yes, sir.

Senator NELSON. As fast as you can cut it?

Mr. SLOAN. Yes, sir.

Senator NELSON. It is dried by artificial means?

Mr. SLOAN. No, sir. The only dry timber is in the cabin work and the decking.

Senator NELSON. All the rest is green timber, not even kiln-dried?

Mr. SLOAN. No; it is all green.

Senator NELSON. Do you think that ships built from green timber like that are good ships? Do you think it is a good investment for the Government to keep building a lot of wooden ships from green timber?

Mr. SLOAN. Yes. Green timber, Senator, does not affect the life of the vessel as much as you may think it does, for this reason: If the timber is good, No. 1, merchantable timber, without sap in it, it does not make very much difference if the sap is below the water; but if you get the sap above the water it has a tendency to rot. But a wooden ship that is taken care of will last 20 years.

Senator NELSON. Yes; but will not the timber above the water shrink a good deal if it is green timber?

Mr. SLOAN. Well, it is painted.

Senator NELSON. You go over that with oakum, don't you?

Mr. SLOAN. We fill in the seams with the oakum. In our ships there are five threads of oakum; the specifications do not call for that, but we put it in. It does not shrink so much, and the ships are good for 20 years. Now, this is an emergency, and any ship that can be gotten out is needed, and needed badly.

Senator NELSON. But none of your ships, even if you had the contract, would be ready until fall, would they? Even if you took the yard now you could not have any of these Government ships ready for several months yet?

Mr. SLOAN. Senator, if my brother and I are placed back in charge of our plants we will deliver the boats from 30 to 60 days quicker than you will get them under the present management.

Senator NELSON. When could you deliver the first boats?

Mr. SLOAN. That I could tell better after I got home. I do not know what timber contracts they have got. It all depends on timber. We have got the iron, we have got the engines, we have got the boilers, and every single piece of equipment that goes in the boats.

Senator NELSON. All of it?

Mr. SLOAN. Yes, sir; all but the furniture that goes in the cabins. Every other piece is contracted for, and the boilers for the first ships are now in our yard in Olympia. The engines for the first ships will be in our yard within 60 days. I had our auditor check over the affairs in the shipyard office at Olympia a week ago last Tuesday when I went down. I wanted to find out what contracts had been let for timber between the time that I had gotten home on the 5th of December and that date. He could not find out.

Senator NELSON. Your grievance, then, is substantially this, that the Government having taken over the yard and the building of the ships, they will do it in a more inefficient manner or more expensive manner and more wasteful manner than you would do it?

Mr. SLOAN. Yes.

Senator NELSON. That is your theory?

Mr. SLOAN. Haven't I reason to believe that, when the first thing they did was to let out my brother, who is considered the best wooden ship builder in this country? I am not saying that because he is my brother; we will forget that part of it. When they would let out Mr. Piper, of the Capital City Iron Works, and by so doing let out Mr. Cary, who was considered one of the best marine engineers in the Puget Sound country, have I any reason to think otherwise?

Senator HARDING. Why were they let out?

Mr. SLOAN. Inefficiency, according to the district officer.

Senator NELSON. And you do not think they would get as much work out of the men as you would?

Mr. SLOAN. Why, that is my belief; yes.

Senator NELSON. What time were you working on? An 8-hour or 10-hour day?

Mr. SLOAN. Eight; the shipyards are working eight.

Senator NELSON. And you maintain that you could get more work out of the men in the eight hours than the Government can?

Mr. SLOAN. Yes; I can. I will tell you why. I started in with Mr. McAllister on the 15th of October to take care of the technical end of our business. I had already started to make my changes. The Government has not done as much work since they have taken

the yard as I had done in the month of November. They let out Mr. Jones. Mr. Jones was a union man, but he was a good man to get the men to work with him. He was our assistant superintendent. They let him out. He kept the union men in line; they worked with him. They would do anything for him. He was let out.

Senator NELSON. Now, do you know on what theory they let out these men that you speak of?

Mr. SLOAN. The only theory, Senator, that I can figure out is this: They did not want a man who was in any way associated with me at all, no matter what his ability was, or anything else. Now, I am not talking about my executives; they had nothing to do with letting out our secretary-treasurer. I did that voluntarily. I will be very frank with you on that. I am not blaming the board for that. I did that.

Senator NELSON. Then, you are to get a salary of $25,000 a year from the company?

Mr. SLOAN. $25,000 a year. I drew at the rate of $25,000 a year from the 20th day of last January until the 1st of December. I was asked if I would consent to a reduction in salary until the last Government boat was completed, and I said yes.

Senator NELSON. As I understand it now, you are working on the basis of $10,000 a year?

Mr. SLOAN. Yes.

Senator NELSON. That is to be paid by the Government?

Mr. SLOAN. That is, the Sloan Shipyards Corporation pays it.

Senator NELSON. The company pays it?

Mr. SLOAN. Yes; the company pays it.

Senator NELSON. Does not the Government advance it?

Mr. SLOAN. No; that is paid out just the same as the salaries and all that is paid.

Senator NELSON. The Government pays that, of course?

Mr. SLOAN. Yes; but it is our contract.

Senator NELSON. The Government furnishes the money for that, just the same as it does for the workmen?

Mr. SLOAN. Yes.

Senator NELSON. So it comes out of the Government?

Mr. SLOAN. Yes, it is charged up against our contract.

Senator NELSON. Well, don't you think you are pretty well fixed, getting $10,000 a year and not having any work to do?

Mr. SLOAN. No, Senator; I work. I can not sit down. I was brought up in this business.

Senator NELSON. But you are not prevented from completing those other ships that you have got, are you?

Mr. SLOAN. I am prevented from having any say whatever in anything.

Senator NELSON. Do they not allow you to do anything with those other outside ships?

Mr. SLOAN. No.

Senator NELSON. Do they carry on the work on those too?

Mr. SLOAN. Yes.

Senator NELSON. Together with the Government ships?

Mr. SLOAN. Yes; I have absolutely nothing to say about anything. Now, I am perfectly delighted—and it was at my suggestion to the Shipping Board—that an auditor has been sent into our yard to

represent the Government and certify every single voucher before it is paid by the Sloan Shipyards Corporation. But to have to sit idly by and see such a magnificent plant as those pictures represent, that was brought into existence by my efforts, practically wiped out of existence, which it will be if matters go on the same as they are going on—it is impossible not to feel bad about that.

Senator NELSON. I want to call your attention to something that looks queer to me. Maybe you can elucidate it. Your option contract, as I understood, was the 12th of April?

Mr. SLOAN. I think it was dated the 12th of April, yes.

Senator NELSON. A short time after they got that option contract for you, Mr. Ferris gave a letter of introduction for Mr. Barnett to Gen. Goethals, and sent him down here to negotiate this contract. Can you give any explanation of that?

Mr. SLOAN. I knew nothing about that letter until I saw the statement made by Mr. Ferris on the stand here—nothing at all.

Senator NELSON. And he introduced Mr. Barnett, the president of that company, to Gen. Goethals as a good shipbuilder.

Mr. SLOAN. That I know nothing about, Senator.

Senator NELSON. At the same time he had an arrangement with the company that he was to get a percentage on those ships?

Mr. SLOAN. The connections between Mr. Ferris and the Clinchfield Navigation Co. I know nothing about.

Senator NELSON. No, probably not; but if you would think it over and look at it I believe you would think it was a little strange.

Mr. SLOAN. Mr. Ferris was retained by the Clinchfield Navigation Co. as naval architect and engineer to design the boat and look after the construction of their boats.

Senator NELSON. The Ferris type of ship he got up for the Government after he had been employed by the Government, at the rate of $2,500 a month, with 30 per cent of what he called overhead charges. He designed that type of ship for the Government, called the Ferris type, that they have used for all these wooden ships.

Mr. SLOAN. He used his other lines very much in designing the Ferris type for the Government. On the Ferris type of ship he used the lines of the motor ships, with the exceptions of the round stern for the steamers in place of the yacht stern for the motor ships, and then the steel strapping.

Senator NELSON. I think your misfortune would not have come if you had contracted with the Government for the ships.

Mr. SLOAN. I could not, because I could not take any more work.

Have you got in your mind clearly every single thing you want to ask me? Can I explain anything more?

Senator NELSON. No; if there is anything more that you think you ought to explain you may do so. I do not want to be too urgent about these things.

Mr. SLOAN. As I said before, you may ask me any question you desire whether it is personal or otherwise.

Senator NESLON. Do you not think that inasmuch as the Government has taken possession of the plant now, the wise thing for you to do is to let them go on and finish?

Mr. SLOAN. All right. Then if they break me, ought not the Shipping Board to be responsible?

Senator NELSON. I do not think they will break you; I do not see how they can. You are so much ahead of the Government now.

Mr. SLOAN. But here, supposing they do wipe out all our profit and everything else, and incur an indebtedness of a quarter of a million dollars; should I be held responsible for that loss, or should the Shipping Board be held responsible for it?

Senator NELSON. You are assuming something that I do not think you are quite warranted in assuming.

Mr. SLOAN. If you saw the conditions out there and saw our plant and saw what had been done, you would think pretty nearly the same as I do.

Senator JONES. Right in that connection, Mr. Sloan, I have had in mind a question to ask you. Suppose that under the operations of the Government these ships cost more than $490,000. How does the Government reimburse itself for that extra cost?

Mr. SLOAN. With our plants.

Senator JONES. Under the contract is the Shipping Board given a lien on your plants for that amount?

Mr. SLOAN. Not a lien. If we put up this bond they would have the bond.

Senator JONES. But you have not put up the bond.

Mr. SLOAN. No; but I am ready to do a lot of things.

Senator JONES. But as it is now the Government has no security for any expense that it may cost over and above the $490,000, have they?

Mr. SLOAN. No; but they could hold the plants.

Senator RANSDELL. You say you put $125,000 of your own money in that plant? They have got that, have they not?

Mr. SLOAN. It is in the plant; yes.

Senator JONES. What claim have they on the plant?

Mr. SLOAN. None.

Senator JONES. That is what I mean.

Mr. SLOAN. Only on finishing their contract they would be in control.

Senator JONES. But when they get these ships finished can they continue in control of the plant? Is there any such provision?

Mr. SLOAN. I do not know, Senator, as to that. Our attorney would have to answer that.

Senator JONES. You have not entered into any agreement that you know of by which they could continue in control?

Mr. SLOAN. No. There may be a clause in that contract—I am not quite clear about it—which says we will reimburse them for the difference.

Senator JONES. Which contract do you refer to?

Mr. SLOAN. The May 18 contract.

Senator JONES. That is in the record, of course?

Mr. SLOAN. Yes.

Senator RANSDELL. Was every bit of the $1,700,000 expended by you in the construction of the plant?

Mr. SLOAN. Oh, no; I do not suppose that there went into plant construction more than $315,000.

Senator RANSDELL. What became of the balance of that $1,700,000.

Mr. SLOAN. Buying machinery, buying boilers——

Senator RANSDELL. It has been used in the general business of getting those boats ready?

Mr. SLOAN. Yes.

Senator RANSDELL. You have not used it in your private business, have you?

Mr. SLOAN. No, sir.

Senator RANSDELL. Every dollar of it has gone into some branch of that business?

Mr. SLOAN. Yes; I have not any private business outside of the shipyards, and the Capital City Iron Works. I do not own a dollar's worth of stock in any plant, nor anyone belonging to me owns a dollar's worth of stock in any plant that we have given a dollar's worth of business to.

Senator RANSDELL. I just wanted to make it clear that you had utilized every bit of that money in getting these ships ready.

Mr. SLOAN. To get these ships out in the quickest possible time.

Senator RANSDELL. And in addition, you stated you had about $125,000 of your own money in it?

Mr. SLOAN. Money that I made.

Senator RANSDELL. You individually, personally?

Mr. SLOAN. Yes.

Senator JONES. You paid a part of that money to the Clinchfield Co.?

Mr. SLOAN. As I explained, there was $317,000 went to the Clinchfield Co., but outside of that every dollar went into it. There was $154,000 of that that the Clinchfield Co. was absolutely and unqualifiedly entitled to, because they advanced that on their own contract to me.

Senator HARDING. Were you ever called upon to verify these charges for material, etc., claimed to be on hand?

Mr. SLOAN. You mean by the Shipping Board?

Senator HARDING. Yes.

Mr. SLOAN. No.

Senator HARDING. Did you ever tender a verification of your machinery and equipment and lumber expenditures?

Mr. SLOAN. Yes; they have got that. That was all tendered and sworn to in an affidavit.

Senator HARDING. Was that done before they took over the yards?

Mr. SLOAN. Oh, yes. The affidavit accompanying the request for the payment, you understand, was made out and signed before the $1,724,000 was paid.

Senator HARDING. Was that a blanket affidavit or did it give the details?

Mr. SLOAN. It gave it in details. The form of affidavit and blanks was furnished by Mr. Purse, the district auditor.

Senator HARDING. Was there a considerable portion of this material on hand and intended for the four power ships which you were building?

Mr. SLOAN. None of the material purchased for the Government ships went into the motor ships at all. It is going in now, because it is all one now.

Senator JONES. I want to ask Mr. Sloan a question. Mr. Sloan, how much delay do you think the taking over of these ships by the Government has resulted in?

Mr. SLOAN. I think, taking the Anacortes yard alone, depending on the timber, that at the rate they were going there when my brother stepped down and out, the first two boats would have been

in frame now and the next boat started. I figure that on account of the delay that has been caused by Government interference—that is, since practically the 1st of November—we have been delayed 60 days. Without taking into consideration anything else, but lumping them all together, and hammering away just as hard as we could work, we could get the whole contract out by a five months' extension of time, or a delay of five months. Now, to give you just one illustration——

Senator JONES. You really are not answering what I asked.

Mr. SLOAN. What was that, Senator?

Senator JONES. I wanted to know how much delay, in your judgment, has been caused by the taking over of these ships by the Government?

Mr. SLOAN. Sixty days.

Senator JONES. That is all I wanted. Who negotiated this contract you have with the Shipping Board?

Mr. SLOAN. Mr. Barnett.

Senator JONES. You had nothing to do with that at all?

Mr. SLOAN. Nothing at all.

Senator JONES. That was Mr. Barnett, of the Clinchfield Navigation Co.?

Mr. SLOAN. Yes.

Senator JONES. So that whatever terms were made favorable to your company, as to the advancement of money, etc., resulted through negotiations through Mr. Barnett?

Mr. SLOAN. Yes, sir.

Senator JONES. Do you know with whom he negotiated? You do not know who represented the Shipping Board in making this very advantageous contract?

Mr. SLOAN. No. May I ask you a question?

Senator JONES. Yes; I will answer it if I can. I know nothing about this contract.

Mr. SLOAN. What do you mean when you use the word "advantageous"? It has proven anything but that to us.

Senator JONES. I referred to the suggestion here of the advancement of this $1,700,000 without very much having been done. In other words, you had nothing to do with arranging those terms?

Mr. SLOAN. No.

Senator JONES. And if they were advantageous, the result came from negotiations by Mr. Barnett with somebody representing the Shipping Board?

Mr. SLOAN. Yes. I had nothing to do with the negotiations whatever. As I said, I did not see the contract until it reached Seattle, about one week after it had been signed by Mr. Richards. I was not in Washington, as I said before. I never met Gen. Goethals. I never met Mr. Cotton. I did not know either one of the gentlemen.

Mr. CHAIRMAN. I have here a letter sent by us on November 19, 1917, to the Emergency Fleet Corporation; a statement from Capt. Raymond, former inspector for the board; and a brief statement of facts relative to securing ship timber, submitted by the Sloan Shipyards Corporation, which I should like to have inserted in the record.

(The letter and statements referred to are here printed in full, as follows:)

DISTRICT AUDITOR'S REPORT OF SEPTEMBER 14, 1917, ON CONTRACT NO. 6, W. C.—SLOAN SHIPYARDS CORPORATION.

[Attention of Mr. White.]

NEW YORK, *November 19, 1917.*

EMERGENCY FLEET CORPORATION,
Washington, D. C.

GENTLEMEN: I have examined the report of the Seattle district auditor, dated September 14, 1917. Much of the report consists of statements of fact without comment, and I am unable to determine whether it is criticism or not. Certain criticisms are obvious, and to these I wish to refer briefly:

1. *Statement that signature was refused to affidavit specifying work done (p. — of report).*—An unusual form of affidavit was presented to me, which dealt with minute details as to the prices, persons with whom we dealt, etc. I therefore asked advice in regard to it, and, as is stated in the report, signed the affidavit on the day after it was requested, and have ever since signed all other affidavits and have given whatever information was at any time desired.

2. *Statements on which payments have been made correct.*—On pages 5 and 6 the form of affidavits required in connection with payments 1 and 2 are given, with the comment that statements, which I was requested to make in connection with the payments, having been verified by your auditor, the payments were made.

3. *Expenditures by the Sloan Shipyards Corporation of its money.*—The remainder of the report deals largely with the method in which the Sloan Shipyards Corporation has expended the first and second payments which it received from the Government. It is my understanding of the contract that it does not regulate the method in which the money received from the Government should be spent, and the special forms prepared by the Government and submitted to me are drawn apparently in accordance with this view. They do not in any way attempt to deal with the expenditure of the money.

4. *Certification of subsequent installments (p. 6 of report).*—It is stated that although the keel of one vessel, hull No. 39, has been laid and half in frame, and work has been done on other vessels, no further payments have been made by the Government because the inspector has not certified that such work has been done. Since the report was made, work has progressed so far on hull No. 39 that it has reached the stage when the fourth payment is due, the ship being all in frame and keelson in, and hulls Nos. 40, 41, and 42 have reached the third stage, yet no payment has been made. Certificates have now been issued by Mr. Schneidewin, the governmental inspector, calling for the payment of five installments in all, and those payments should be made at once to enable the Sloan Shipyards Corporation to proceed rapidly with their building.

INDIRECT ITEMS.

On pages 8 and 9, and in Schedule 1, certain items are referred to as "indirect items." These expenditures have all been made with a view to forwarding the work as rapidly as possible, and are treated under subdivisions 5, 6, and 7 following:

5. *Capital City Ironworks, $57,250 (report, pp. 8 and 9).*—These ironworks were bought for the sum of $21,000, because it was an absolute necessity to have the machinery to turn out the ironwork in connection with the construction of the ships and not be at the mercy of ironworks in other cities. This plant is the only iron plant in Olympia. The balance of the $57,250 went into our new equipment, additional buildings and merchandise, shafting, iron, etc. Full details of this equipment can be furnished on request. Mr. Piper, vice president of the Sloan Shipyards Corporation, is manager of the ironworks. We believe that he has unusual ability to manage a plant, handle men, and obtain from them largest amount of work. His superintendent, Mr. Currie, is so well known for his ability as a marine engineer in and around the Puget Sound district that the company was fortunate to be able to secure his services. The foundry foreman and pattern-shop foreman are the same men who were in charge of these departments when the plant was owned and operated by Mr. Bamford. Mr. Currie, working under Mr. Piper's direction, has proved most efficient. The report refers to products of the works rejected by the inspector in September. Certain bitts are referred to, which were not rejected for bad workmanship but on a question of their pattern. This pattern has been submitted to Mr. Ferris and we believe will be approved as being according to the specifications.

6. *Anacortes Shipbuilding Co., $120,500 (report, p. 9).*—This is a new company, which put up a plant at Anacortes so that the 16 vessels contracted for by the Government might be built more rapidly. No builder of wooden vessels on the Pacific coast has a higher reputation than Joseph A. Sloan, its president. Six of the present vessels are being constructed at Anacortes simultaneously with the vessels in the Sloan Shipyards at Olympia, and 2 more will be added, making it possible to construct all 16 vessels at the same time. To meet any possible criticism because of the separate organization, the entire stock of the Anacortes Shipbuilding Co. is now being turned over to the Sloan Shipyards Corporation in trust, to be held until the Government contracts are completed.

7. *Wisconsin Timber Co., $60,000 (report, pp. 9, 10).*—This contract is annexed to the report, marked "Exhibit A," and speaks for itself. By an advance payment, secured by an issue of bonds, the Sloan Shipyards Corporation was enabled to make a very advantageous contract, and the timber is being satisfactorily obtained. At the present time the contract could be sold at a large profit.

8. *Premier Engine Works (report, p. 10).*—We canceled the contract with the Allis-Chalmers Manufacturing Co. for 6 engines, for the reason that they could not send a representative of their company to supervise the installation of the engines. Thereupon the Sloan Shipyards Corporation entered into a contract with the Premier Engine Works, of Portland, for 4 engines, and $20,000 was the initial payment, as stated in the report. The installation of these engines will be superintended by the Premier Engine Works. It seems almost inconceivable that anyone would sublet a contract for an engine without insisting upon the responsibility of the subcontractor to supervise the installation. Castings are now being made for these engines.

9. *Clinchfield Navigation Co., $317,548 (report, pp. 8, 11).*—The original contract with the Clinchfield Navigation Co. was for the construction of 4 wooden steamers, coupled with an option for 12 more wooden steamers. When the contract was made with the United States Government, the construction on the 4 wooden steamers had been begun and payments on account of them, amounting to $154,000, had been made by the Clinchfield Co. In order to enable the Sloan Shipyards Corporation to make a contract with the United States Government, it was necessary that the Clinchfield Co. should surrender back the title to the vessels just begun and the material acquired in connection therewith (receiving back, of course, the money that they had paid therefor), and that they should also surrender their option for the additional 12 wooden steamers. To induce the Clinchfield Co. to relinquish its claim upon the Sloan Shipyards Corporation, it was necessary for the latter to agree (1) to return the $154,000 received in advance payments on the 4 vessels already started; (2) to pay the Clinchfield Co. the difference between their original contract price on the 4 and the Government's price, less the additional cost of making each steamer comply with the Government plans; and (3) to pay the Clinchfield Co. a commission of 5½ per cent upon the 12 vessels for which they held the option. The payments made the Clinchfield Co., down to the time of the filing of the report, and down to the present time, are $317,000, but, as already stated, $154,000 thereof was to reimburse the Clinchfield Co. for their advance payment on the first 4 steamers which are now being built for the Government, and $100 000 or more will probably be needed to make these 4 steamers comply with the Government plans.

10. *Schedule 2 (annexed to report).*—In Schedule 2 is included a summary of practically the entire business of the Sloan Shipyards Corporation from June 1 to August 31, and the items are so grouped that it is impossible, without the books, to know to what they refer. The following general observations, however, may be made.

The Seattle Dry Dock Co. was the predecessor of the Sloan Shipyards Corporation, the corporation being identical except for a change of name. Prior to the making of the contracts with the Government, preferred stock dividends had been earned to an amount aggregating $24,257.84. Prior to receiving the first payment from the United States Government, I had, individually, received a commission of $100,000, and claim an additional commission of $200,000, in connection with the sale of the first four motorboats that were built by our company. I had been instrumental in negotiating a sale between the Clinchfield Navigation Co., who originally purchased these boats, and R. M. Calkins, of Seattle. Being unwilling to personally retain this commission, I gave it to the company, and will give to the company the additional $200,000, when collected, and the dividend of $24,257.84, above referred to, was paid out of that commission account by resolution of the board of trustees. The balance is still retained in the business.

The Philip D. Sloan $10,000 item is a mere bookkeeping matter, this item being offset by a payment from me to the company.

GENERAL.

11. *Alleged 20 per cent commission on motorships (report, p. 12).*—It is stated that 20 per cent of the moneys to be hereafter received for the 4 motorships originally sold to the Clinchfield Co. and resold to R. M. Calkins will be paid in commissions. This statement I do not understand. The only commission to be paid by the company is one of $7,000 on each ship, less than 2½ per cent, to Charles M. Barnett. This commission has been much more than made good by the commission of $300,000 which I earned on the resale of these boats, $100,000 of which has been paid and turned over to the company, as previously stated.

12. *The management of the Sloan Shipyards Corporation.*—As to the statement that the management is inefficient, we respectfully refer you to what we have accomplished during the past eight months, in spite of the chaotic conditions that existed in the Puget Sound mills and lumber camps during the summer. At Olympia more than 10,000 piles were driven, capped, and planked, buildings constructed, machinery installed, eight boats being now under construction, the first two ready to launch in two weeks. The Anacortes yard has been entirely built, four keels were laid a month ago, and two others have been or soon will be laid. The Capital City Ironworks has been practically entirely rebuilt. Photographs of the two shipbuilding plants, showing also the class of work done, are now in the hands of Vice Chairman Stevens. On April 13, 1917, Vice Chairman Brent telegraphed us as follows:

"Shipping Board has to suggest that you perfect your plans promptly in order that you may be prepared to expand your plants to handle maximum amount of construction you have indicated it is your intention to undertake for Government without unnecessary delay when board is ready to let contracts."

The company bent every effort to be so prepared. Special attention is called to the fact that the speed of the work is greatly increased with every week, and only the most recent reports will adequately show the high class of workmanship exhibited by our yard at present. References can be given to disinterested parties, if desired, who will certify that we are doing as high a class of work as any shipbuilding plant on the coast and are using exactly the same class of timber that all other wood-ship yards are using, in some cases getting it from the same mills.

13. *Delays in the work.*—There is no question that there has been great delay in connection with the work, but this is equally true of every shipyard on the Pacific coast. The principal difficulties have been due to strikes in the lumber camps and mills. Delays have also been caused by the Government. Mills would not quote prices immediately after the signing of the contract, because they were waiting for the Government to fix them. When prices were fixed, they were so high as to cause further difficulties, and the lumber strikes followed immediately. Many letters could be submitted, if desired, to show that other yards have been delayed as ours have been, and that our experience is not exceptional.

14. *Changes in specifications.*—We have also been delayed by many changes in specifications, of which we could give you particulars should you desire it. The important point, however, now is not to discuss the past, but to deal with the one point, Can the Olympia and Anacortes yards build good ships rapidly at the present moment?

CONCLUSION.

The report above referred to deals chiefly with the expenditure of the money by the Sloan Shipyards Corporation in connection with the payments of the first and second installments under the contract. These installments did not refer to any definite stage of each vessel's completion, but related only to materials obtained and commitments made, and the report therefore suggested that there was some occasion for inquiring how the expenditures of the Sloan Shipyards Corporation had been made.

I very respectfully submit that, at the present time, the situation is entirely altered. The Sloan Shipyards Corporation is to-day asking for the payment of the third installment on four ships and the fourth installment on one. In regard to such payments, there is an absolutely definite provision in the contract, quoted on page 3 of the report, that installment 3 shall be paid when the keel of each ship is laid and half in frame; that installment 4 shall be paid when the vessel is all in frame and keelson in. The contract therefore precisely defines when the builder is entitled to the payment of the third and subsequent installments, the purchaser being called upon to make them because the vessel has reached a certain state of completion specified in the contract. The contract also provides that the Government shall have title to the vessels as they are building and to materials and equipment as paid for. The Government therefore holds to-day the security covered by the legal ownership of each of the 10 vessels

already under construction, and the boilers, engines, and equipment already delivered and contracted for for the entire 16. The Sloan Shipyards Corporation therefore should promptly receive the payments due under the contract as each ship reaches the stage of construction specified.

The withholding of the two payments due on August 30 has very seriously injured the credit of the Sloan Shipyards Corporation. In spite of that fact, we have continued our work with increasing speed, until five installments of $63,700 have been earned and are now due. The withholding of these payments will, in my judgment, be a clear breach of our contract with the Fleet Corporation and will inevitably stop the work at both of our yards. With the Government payments regularly coming in, we are absolutely sound, financially, but no yard which is building 16 ships can continue that work indefinitely when the payments are stopped.

Were the situation less urgent, I should be glad to have all questions of fact investigated and any disputed questions of law or fact arbitrated. That procedure, however, is too lengthy, in view of the fact that our payments have been held up for over two and one-half months, and I must ask the Fleet Corporation to immediately take over the operation of our yards if the back contract payments are not to be made at once. That course is even more necessary in the interest of the Government than for the protection of the Sloan Shipyards Corporation. Once our organization is destroyed, the situation will be quite hopeless and you will be left with 10 unfinished ships and engines, boilers, and equipment for 16, and no way of completing the work which we have begun until you have collected a new organization.

Knowing the urgent need of the ships for war purposes, I do not feel that my argument will be at all strengthened by adding the statement that the Sloan Corporation would, of necessity, look to the Fleet Corporation for full compensation for all losses which it might sustain through such a catastrophy.

Very truly, yours,

[Not signed.]

STATEMENT FROM CAPT. RAYMOND, FORMER INSPECTOR FOR BOARD.

Letter, June 26: Contents refer to keels and keelsons, locked or keyed. Size of keel, 20 by 16 inches.

Letter, June 30: Authority to accept two present keels, 20 by 20 inches. In future 20 by 16 inches will be followed.

Circular 22, July 18: All sawn timbers can be ordered cut previous to surfacing.

Letter, July 28: All future keels are to be 20 by 16 inches.

Form C-41, July 27: First-grade hickory treenails can be used.

Circular 47, August 4: Black-locust treenails only to be used.

Circular 45, August 2 (received this circular Monday, August 20): Omit surfacing on frame timbers.

Circular 58, August 15: Tenons changed to 3 by 6 by 4 inches instead of 5 by 14 by 12 inches, as shown on plans.

Circular 61, August 15: Locust, osage orange, eucalyptus, and iron-bark treenails only to be used.

Circular 65, August 17: Stern post to be fir, selected, butt-log sided, 30 inches in way of shaft log and molded 33 inches.

Circular C-87, September 10: Honey-locust or brittle-locust treenails not accepted.

Letter, September 13: No fir treenails to be used for any purposes.

Circular 116, September 24: Stern post to be 30 by 48 inches as originally planned.

Circular 121, September 29: No holes to be bored in shaft log and stern post until further notice.

Circular 129, October 3: Main frames only may be fastened with fir treenails. This change in treenails from hardwood to fir does not eliminate the iron fastenings as called for in specifications.

Frame butts: All butts should be properly fastened with seven-eighths drift bolts.

BRIEF STATEMENT OF FACTS RELATIVE TO CONDITIONS IN SECURING SHIP TIMBER DURING THE PAST FOUR MONTHS, SUBMITTED BY SLOAN SHIPYARDS CORPORATION, SEATTLE, WASH.

On March 20, 1917, we received a letter from our president, Mr. Philip D. Sloan, then in New York City, instructing us to contract for 20,000,000 feet of ship timber, in addition to the contract covering timber for the four motor ships that had already been placed.

We were unable to secure anything definite relative to prices or promises from the owners of the mills, from whom we had already purchased timber for four ships.

In June the secretary of our company, Mr. J. O. Pierce, personally visited mills in Aberdeen, Hoquiam, Wallville, McCormick, Pe Ell, Centralia, and other places, and while he was very courteously received, found it was impossible to contract with any of the mills covering sufficient timber for even one ship. Nearly all of the managers of these different mills stated they would not consider entering into a contract until prices and grading were definitely decided upon. We were, however, fortunate enough to have orders accepted at this time covering approximately 300,000 feet of flitches.

We have also been able to secure, after the most strenuous kind of efforts and at extremely high prices, keels, keelsons, stems, etc., for four steamers that are now coming along very nicely at our yard in Olympia.

Have also secured timber for four keels that are now in place at our yard in Anacortes.

In July and August our secretary again paid a visit to a number of different mills and used every possible effort to secure timber, but on account of strikes among the loggers, also at a large number of the mills, we found it absolutely impossible to purchase or contract for any quantity of timber, although we did succeed in picking up a carload here and there that kept our yard in operation to a limited degree.

Some time ago we contracted with a finely equipped mill for 10,000,000 feet of ship timber. In order, however, to saw the long material a number of changes were necessary. These changes we are pleased to advise are now practically completed and this mill is now ready to saw and start shipments on the long timber. Within the past 10 days and including materials now in transit they have shipped us between 300,000 and 400,000 feet, consisting principally of framing timbers. With this mill in full operation we feel confident our timber troubles will be practically eliminated, and feel certain that from now on we will have very little difficulty in securing the necessary timber as fast as required.

While we perhaps might furnish more specific details relative to the timber situation, we believe the above information will convince the board that the securing of timber on the Pacific coast for shipbuilding purposes has been a very serious problem, and we earnestly hope that the turning point has been reached, as every official connected with our corporation is more than anxious to do his utmost to further the shipbuilding program of the Emergency Fleet Corporation.

Also wish to add that we impressed upon each party that timber required was to be used on vessels we were constructing for the Government, but this fact, apparently did not afford us any relief.

Respectfully submitted.

J. O. PIERCE, *Secretary*.

STATE OF WASHINGTON,
County of King, ss:

J. O. Pierce, being first duly sworn, on oath deposes and says as follows: That he s the secretary of the Sloan Shipyards Corporation, and has been such for more than ix months last past; that he is the person who has made the foregoing statement; hat he knows the contents thereof, and that the facts therein stated are true.

J. O. PIERCE.

Subscribed and sworn to before me, this 17th day of October, 1917.

[SEAL.] HOWARD M. FINDLEY,
Notary Public in and for the State of Washington, residing at Seattle.

Senator JONES. Mr. Sloan, have you read the testimony given here by Admiral Bowles? Not in the papers, but the testimony as taken and transcribed?

Mr. SLOAN. No.

Senator JONES. I suggest that you see the clerk of this committee and get a copy of that and look over it, and then if there is any further explanation you want to make, or any suggestions, I know the committee will give you an opportunity to do it.

Mr. SLOAN. Thank you; I will do that.

Senator JONES. I want to say, if there is any explanation you want to make of any matters, the committee will be glad to hear you. I want you to feel that you have had every opportunity to explain this matter.

Senator RANSDELL. We are very much obliged to you, Mr. Sloan. I believe the next witness is Mr. F. C. Knapp, of Portland, Oreg.

STATEMENT OF MR. F. C. KNAPP, PRESIDENT PENINSULA SHIPBUILDING CO., PORTLAND, OREG.

Senator RANSDELL. Will you please state your full name, residence, occupation, etc.?

Mr. KNAPP. F. C. Knapp, president Peninsula Shipbuilding Co., of Portland, Oreg. I am in Washington on entirely different business from the investigation here before the Senate committee, but upon my arrival here friends of mine requested me to come and make a few statements to this committee on, I think, more a practical knowledge of timber than anything else. And it is along that line, if I say anything, that I wish to talk.

Senator RANSDELL. We will be glad to hear you, sir.

Mr. KNAPP. I wish to say that while I am from the State of Oregon, I have no quarrel with any department of the United States Government whatever. My relations with the Shipping Board are friendly.

Senator NELSON. Have you any contract with them?

Mr. KNAPP. Oh, yes. I have a contract for eight ships. Before going further, if you will allow me, I would like to pay a slight tribute to the gentlemen now at the head of the Emergency Fleet Corporation. These gentlemen are strangers to me. Two of them, Mr. Hurley and Mr. Piez, I have never met. Mr. Heyworth I have known for six weeks. The team work that is being done and the results that are being accomplished on the Pacific coast under the direction of these gentlemen will be highly gratifying to the Nation. I make that statement without the request of anybody, but as a tribute to three men who seem to be giving the best there is in them to helping to win this war.

Senator NELSON. May I ask you some questions right there? You are president of a shipbuilding company?

Mr. KNAPP. Yes, sir.

Senator NELSON. What is the name of it?

Mr. KNAPP. The Peninsula Shipbuilding Co.

Senator NELSON. At Portland, Oreg.?

Mr. KNAPP. Yes, sir.

Senator NELSON. Did that company have a shipyard before you took a Government contract?

Mr. KNAPP. Yes.

Senator NELSON. It was an existing shipyard?

Mr. KNAPP. Yes, sir.

Senator NELSON. You had been engaged in building ships before that?

Mr. KNAPP. Yes.

Senator NELSON. And the Government did not advance you any money to enlarge your shipyard, did it?

Mr. KNAPP. No.

Senator NELSON. It was a straight contract for building ships?

Mr. KNAPP. Yes, sir.

Senator NELSON. Excuse me for breaking in.

Mr. KNAPP. Anything you wish to know that is in my line I shall be glad to give you.

To go on, I think that perhaps I should take up the question that was mentioned a few moments ago by Senator Nelson, that of green timber. I will state first that I have spent 30 years of my life in

handling timber, from the carpenter's plane to ships. We have on the Pacific coast, from the British Columbia line to the California line, a distance of some 400 miles, a stretch of timber about one hundred and twenty-five miles in width, a stand of timber that is equaled nowhere in the world, except in the Manchurian Peninsula. This timber runs about 90 per cent Douglas fir. The Pacific Ocean for years has been dotted with vessels built from Douglas fir. Your shipping records will show you that there are now on the Pacific Ocean at least 40 vessels built of Douglas fir, ranging in age from 15 years to 40 years.

Senator NELSON. Let me ask this question in that connection. Before this war emergency came on us were the shipbuilders out there in the habit of building their vessels with green timber?

Mr. KNAPP. Yes, sir; that was the point I was leading up to.

Senator NELSON. They do not use dried timber?

Mr. KNAPP. No; it would be a mistake to kiln-dry this material. The kiln-drying of timber to be used in the frames and sides of ships shortens the life of the vessel, on account of sapping the strength.

Senator NELSON. What about the outside timbers?

Mr. KNAPP. That is what I am speaking of.

Senator NELSON. But does not that timber shrink when it becomes dry?

Mr. KNAPP. Not to any great extent if the timber is properly inspected.

Senator NELSON. Your timber is different then from what it is in my country.

Mr. KNAPP. Very much.

Senator NELSON. We used to have one of the best pine States in the Union.

Mr. KNAPP. That is very true. I got what little start I had, Senator, before I went to the Pacific coast, in cutting that class of timber.

Senator NELSON. We always considered it bad policy to build from green timber, houses or anything else.

Mr. KNAPP. And so would I, if we were dealing with the timber with which you and I were familiar 25 years ago. That timber is smaller, the sap is much thicker, and the heart shrinks. The Douglas fir timber of the Pacific Northwest is uniform in size. We have no trouble in getting from the log between the actual heart of the log and the sap of the tree a piece of timber that shrinks in many cases not at all, and never to any appreciable extent.

Senator NELSON. That timber has more pitch in it though, has it not?

Mr. KNAPP. No, it has not. But it is of slow growth, and the annular ring, or the fat, if you please, in between the growth is so small it is hardly discernible, and that fat is what shrinks.

Senator JONES. Do you not think these facts you have suggested show the importance of having some man looking after the cutting of timber who knows these things, instead of sending somebody from the East who is entirely and solely familiar with this eastern timber?

Mr. KNAPP. That might be. I do not think, Senator, that there is any necessity for anyone except the sawmill men and the loggers, those of the Pacific Northwest, to pay much attention to that.

Senator JONES. We had a statement before this committee the other day that some gentleman from the East, a southern pine man,

had been sent out there to see what could be done to hasten the delivery of lumber, etc. Do you not think it would have been much wiser to have had somebody on the Pacific coast to look into that matter?

Mr. KNAPP. That might be true, although I think any practical, unprejudiced man would be able to detect these features of which I speak, whether he came from the South or the East or the Lake States.

Senator JONES. If he had the same ideas that Senator Nelson has, by reason of his knowledge of eastern timber, he would be more likely to make mistakes out there?

Mr. KNAPP. No; if Senator Nelson should come to my yard I think I could show him in three minutes about that timber, and he would understand it exactly.

Senator JONES. I think probably Senator Nelson might, but I doubt very much that some of these others would.

Senator JOHNSON. Your contract is for so many wooden ships?

Mr. KNAPP. Yes, sir.

Senator JOHNSON. Entered into about what time, if you please?

Mr. KNAPP. May 15, 1917.

Senator JOHNSON. How near completion are you?

Mr. KNAPP. We launch one in about a week. The others will follow about 30 days apart.

Senator JOHNSON. You will launch one, you say, in about a week?

Mr. KNAPP. Yes, sir.

Senator JOHNSON. Have you made arrangements for additional contracts for wooden ships?

Mr. KNAPP. No, sir. I have a contract for eight that will take us the most of this year.

Senator JOHNSON. After launching, have you arranged to utilize the facilities of your yard?

Mr. KNAPP. We are covered by contracts for that.

Senator JOHNSON. How many ways have you?

Mr. KNAPP. I have four ways, and contracts for eight vessels.

Senator JOHNSON. Do you know whether shipyards on the Pacific coast have been let contracts at various prices for exactly the same type of ship?

Mr. KNAPP. I do not.

Senator JOHNSON. You are not familiar with that?

Mr. KNAPP. No, sir; I am building my own type of vessel. It is about 20 per cent larger than the standard type of ship. My own contract is the only one with which I am familiar.

Senator NELSON. You are not building the Ferris type of ship?

Mr. KNAPP. No, sir.

Senator NELSON. It is a type of your own?

Mr. KNAPP. Yes, sir.

Senator NELSON. How does it compare with the Ferris type?

Mr. KNAPP. It is about 20 per cent larger.

Senator NELSON. What is the deadweight tonnage?

Mr. KNAPP. It will reach between 3,600 and 4,000 tons.

Senator NELSON. With the same engines?

Mr. KNAPP. We are putting in different engines from those used in the Ferris ships, I think. We are putting in the Westinghouse turbine engines. That gives a little greater deadweight capacity.

Senator JOHNSON. I am sorry I interrupted you in your story.

Mr. KNAPP. My story is so well emblazoned upon my brain that I can take it up at any time, Senator.

Senator JOHNSON. Proceed, please.

Mr. KNAPP. The point I want to impress upon you is that if it is true that we need ships, as Lloyd-George has said, then this country should be building any ships that will give us good service in helping to win this war. I am not here holding any brief for wooden shipbuilding, for steel shipbuilding, or for cement shipbuilding, but let us build all the good ships that we can build.

Now, for fear that there might be in the minds of some members of the Emergency Fleet Corporation or the Shipping Board or this committee an idea that the program of wooden shipbuilding could not be carried out to its greatest efficiency on account of the lack of raw material—and when I speak of raw material I am speaking of wood—I wish to say to you gentlemen, as a man of some 30 years' experience, that there is no limit to which you can go in securing timber for these vessels, because long before you have reached the maximum of production of timber you will have exhausted the man-labor of this country. Do I make myself clear in that statement?

Senator JOHNSON. The suggestion, then, that we might not be able to continue the wooden-ship program because of inability to obtain timber is utterly without foundation?

Mr. KNAPP. Without any question whatever.

Senator JOHNSON. Do you know, from any conversations you have had with the Shipping Board, the intention of that particular board in relation to continuing the building of wooden ships?

Mr. KNAPP. I do not.

Senator JOHNSON. Has any view on that subject been conveyed to you at all?

Mr. KNAPP. There has not.

Senator McNARY. What effort would be required to double the capacity for wooden shipbuilding?

Mr. KNAPP. In this western Oregon and western Washington territory that I speak of, which is about 400 miles long and 125 miles wide, I think we have something like 2,500 miles of privately owned logging railroads. Any time that the Government wishes to get out these special timbers those branch lines can be put into timber that is especially adapted for this work, and it will be perfectly easy to add 50 per cent, 100 per cent, or I believe 150 per cent to the present output.

Senator McNARY. Would that necessitate governmental aid in order to extend these lines?

Mr. KNAPP. Governmental aid, of course, would come in handy, however, I do not think it necessary.

Senator McNARY. Do you think private capital would find that inviting?

Mr. KNAPP. If private capital could be assured that there was a fixed policy of wooden shipbuilding there would be no question about getting out the timber.

Senator JOHNSON. How does the capital of your particular locality feel upon that subject?

Mr. KNAPP. Well, the individuals of our locality read the newspapers. We see contradictory reports, and we read them occasionally.

Senator JOHNSON. Well, we do, too.

Senator NELSON. What about the supply of labor out there?

Mr. KNAPP. Well, I can speak for all the shipbuilding plants on the Columbia River——

Senator NELSON. I mean, the supply of labor for getting out the timber.

Mr. KNAPP. The labor for getting out the timber, I think, is ample.

Senator NELSON. Have you not had strikes among them?

Mr. KNAPP. Not in Oregon.

Senator NELSON. They had up in Washington?

Mr. KNAPP. Yes; "insurgent" States are hard to govern, you know.

Senator NELSON. Do you build complete ships, or do you simply build the wooden hulls?

Mr. KNAPP. I build the ship complete.

Senator NELSON. How much a ton are you getting? What is the price for each ton, you might say?

Mr. KNAPP. That is going in the record, I suppose?

Senator NELSON. Yes.

Senator JOHNSON. Would you rather not state it?

Mr. KNAPP. I have no objections to stating it, but I would hate to have it published.

Senator JOHNSON. That is getting back to what I was asking a moment ago. Is it because these contracts are made at different prices with different yards out there? The reason I ask that question is this: I was told to-day that contracts for steel ships, for instance, on the Pacific coast were let within the past month and a half in three different instances for a certain type of ship at three different prices. Do you know anything about that at all?

Mr. KNAPP. I do not.

Senator JONES. As I understand you, you would think it a mistake because of a fear of not having timber sufficient to meet the demands to stop the wooden shipbuilding,or the letting of additional contract?

Mr. KNAPP. I should think it would be a mistake. We on the Pacific coast know that the wooden ship is practicable. We know that the timber is there. We know the men are there to build the ships. If the Government wants ships then I think it is a mistake not to build them.

Senator JONES. I agree with you, but did you know that the board had decided that until they make further investigation they will not let additional contracts?

Mr. KNAPP. I did not.

Senator JONES. They have. It has been so testified before this committee.

Senator MCNARY. Do you think the impetus of letting contracts would be sufficient to encourage further ship construction and increase the output of the raw products?

Mr. KNAPP. Oh, yes.

Senator MCNARY. Without governmental aid?

Mr. KNAPP. Yes, sir.

Senator NELSON. You say your yard was in existence before you entered into a Government contract. Have you been building ships before?

Mr. KNAPP. Yes, sir.

Senator NELSON. For whom?

Mr. KNAPP. We were building on our own account and selling them in the open market.

Senator NELSON. You had no contracts outstanding then?

Mr. KNAPP. No, sir.

Senator HARDING. Is the shipbuilding industry on the northwest coast turning out all the ships it can for 1918?

Mr. KNAPP. No; the capacity could be increased.

Senator McNARY. With present facilities?

Mr. KNAPP. Yes, sir. Let me explain a little. What I mean is this. Take, for instance, my yard. Under ordinary business conditions I would not care to increase the capacity of my yard. However, I have 3,100 feet frontage upon the Willamet River, with 30 feet of water in front of my dock, and if it were necessary to build ships for the Government I could put in 16 additional ways.

Senator NELSON. In your yard as it is now?

Mr. KNAPP. Yes, sir.

Senator HARDING. Could you afford to do that at the current price fixed by the Shipping Board?

Mr. KNAPP. No; I should think it would have to be covered in some way. There would have to be an advance in the price, or the Government would have to charge off a part of the added expense, because while we all want to be patriotic yet one does not like to lose money that he has worked hard for.

Senator NELSON. I take it from what you have stated that you are getting your ships out on time for the Government?

Mr. KNAPP. Yes, sir.

Senator NELSON. You are not behind, then?

Mr. KNAPP. No. I am very nicely situated there, with my sawmill plant right on the yard, so everything is very handy.

Senator NELSON. You have your own sawmill?

Mr. KNAPP. Yes, sir.

Senator NELSON. You simply buy the logs, then?

Mr. KNAPP. That is all.

Senator HARDING. You mean, then, that to increase the output in that section there ought to be some provisions to amortize your investment?

Mr. KNAPP. I am inclined to think so; yes.

The CHAIRMAN. Have your designs been passed on by the Fleet Corporation?

Mr. KNAPP. Yes, sir.

The CHAIRMAN. And approved by Mr. Ferris?

Mr. KNAPP. Yes, sir. I got one of the first contracts. In fact, I came here before the Fleet Corporation was organized, at the request of the Shipping Board, and talked with them about the proposition.

The CHAIRMAN. That is not the Hough design?

Mr. KNAPP. No, sir; this is my own design, known as the Peninsula design. It is about 20 per cent larger than either the Hough or the Ferris design.

Senator RANSDELL. How long has your shipbuilding plant been in existence, Mr. Knapp?

Mr. KNAPP. About three years.

Senator RANSDELL. So you started about the time the war began?

Mr. KNAPP. Yes, sir; about the time the war started.

Senator RANSDELL. You were not building ships prior to that?

Mr. KNAPP. No, sir.

The CHAIRMAN. Have you stated how far you are along with the work?

Mr. KNAPP. Our first vessel will be launched in about 10 days, or 2 weeks, and then we will follow with the other three about 30 days apart.

Senator NELSON. How long will it take you after you have launched a ship before you can get it equipped for the sea?

Mr. KNAPP. I hope to do it in between 45 and 60 days, Senator.

Senator JONES. There is a great advantage in having contracts so that when you get one ship off the ways you can put another one on?

Mr. KNAPP. Yes indeed. The shipbuilding business is a peculiar business. You have to place your orders ahead for material. For instance, the orders for my material were placed last May, and it is commencing to arrive now. So there will be no delay; as soon as the ships are off the ways the equipment will commence going aboard.

Senator NELSON. Where do you get your engines and boilers from?

Mr. KNAPP. The engines from Pittsburgh, and the boilers from Seattle.

Senator RANSDELL. Did I understand you to say that you hope to finish all those boats during the current year?

Mr. KNAPP. Yes, sir.

Senator RANSDELL. And have them ready to turn over to the Government?

Mr. KNAPP. Yes, sir.

The CHAIRMAN. Do you have any trouble with labor at all?

Mr. KNAPP. We had at the shipyard a sympathetic strike, rather a peculiar one. The steel yards on the Pacific coast had a strike, and my boys said they were requested to go out, and they thought they had better go out, providing I would take care of their tool chests. And so I stored their tool chests under the office while they went out for five weeks and rested. Then they came back.

The CHAIRMAN. When was that?

Mr. KNAPP. That was in September of this last year.

Senator NELSON. What wages do you pay there?

Mr. KNAPP. Our average wage is about $5 per day of eight hours.

The CHAIRMAN. Did that strike cause any delay?

Mr. KNAPP. Five weeks, practically six weeks.

The CHAIRMAN. You did not replace them with others?

Mr. KNAPP. No, sir.

Senator NELSON. They were union men then?

Mr. KNAPP. Not all of them.

Senator NELSON. You run an open shop?

Mr. KNAPP. Yes, sir.

Senator NELSON. And take in any competent men, whether they are union men or not?

Mr. KNAPP. We do.

Senator NELSON. Do you have any difficulty in getting what we call ship's carpenters?

Mr. KNAPP. Yes. You know, Senator, the wooden-ship business not only waned but practically went out of existence for some 25 or 30 years, and there are not as many ship's carpenters as could be used

in the United States. But we find in our yard, and I think that this is true of other yards as well, that a small percentage of house carpenters and a very large percentage of bridge builders and millwrights make in a very short space of time very good ship's carpenters.

Senator NELSON. What do you pay a day for ship's carpenters?

Mr. KNAPP. We are paying a minimum of $6, and then the Government is paying a 10 per cent bonus on top of that.

Senator NELSON. Have you experienced among your men an inclination to work only a part of a week and then lay off?

Mr. KNAPP. No. They brought that to our attention in July, I think, that they wanted to have a half holiday on Saturday.

Senator NELSON. Without pay for the half holiday?

Mr. KNAPP. With pay. After laying the matter before them and showing them how we understood the conditions of the country, I wish to say for my men and the other men there that they waived that immediately, and that question has never been raised since.

Senator NELSON. There has been no raise in wages, then, since you started to work for the Government?

Mr. KNAPP. Yes, sir. We have raised the wages, I think, 70 per cent since we started to work for the Government.

Senator NELSON. Were they raised by this board that is fixing wages?

Mr. KNAPP. No, Senator. I have been an employer of men for a quarter of a century, and I have endeavored to advance the wages of my men in line with the advance of those things which they purchase, and without any request from the men I made something like a 50 per cent advance from month to month in their wages before the adjustment board made the radical advance.

Senator HARDING. Does that modify the price of the ships in any way?

Mr. KNAPP. Yes, sir.

Senator NELSON. Are you paying the wages the adjustment board fixed?

Mr. KNAPP. Yes, sir.

Senator JONES. I believe the Government takes care of a part of that, does it not?

Senator NELSON. The Government is to pay a 10 per cent bonus if they work six days a week?

Mr. KNAPP. Yes, sir.

Senator HARDING. The 50 per cent raise you absorbed yourself?

Mr. KNAPP. Yes.

Senator HARDING. Without any change in the price of the ship?

Mr. KNAPP. I wish to modify my statement there. I wish to say that 50 per cent raise was during the past 16 months. That was quite largely before the Shipping Board work commenced.

Senator NELSON. You mean that since 1916 you have increased wages up to the present time in all about 70 per cent?

Mr. KNAPP. Yes, sir. I wish to make one statement. Some of the gentlemen here, or some one else, may read this testimony in the record and wonder if the timber of the Pacific Northwest will last long enough to carry out this program I have suggested. I think the States of Washington and Oregon have about 40 per cent of the standing timber of the United States—I know Oregon has 22 per cent,

and I think Washington has enough to make up the balance—so there is no question about being able to furnish the raw material.

I wish again to repeat what I said in answer to Senator McNary, that in this timber there are 2,500 miles of privately owned roads, that are easily taken up and moved, so that there is absolutely no question about these two States furnishing all the timber that the country may wish to use in connection with the wooden-ship building program.

Senator NELSON. You own some white-fir timber there?

Mr. KNAPP. Yes, sir.

Senator NELSON. Where is that located?

Mr. KNAPP. Where?

Senator NELSON. Yes; either Washington or Oregon?

Mr. KNAPP. In Oregon.

Senator NELSON. On the seacoast?

Mr. KNAPP. No, sir; it is back from the seacoast about a hundred miles.

Senator RANSDELL. That is the timber you speak of being so highly valuable for ships—Douglas fir?

Mr. KNAPP. Douglas fir; yes, sir. The timber west of the Cascade Mountains runs about 90 per cent Douglas fir.

Senator RANSDELL. What is the fir Senator Nelson was speaking of—Douglas fir?

Mr. KNAPP. Not Douglas fir, but the white pine we had in Minnesota.

Senator RANSDELL. The white pine of Minnesota?

Mr. KNAPP. Yes, sir; the kind Senator Nelson used to know about 25 years ago.

Senator NELSON. We have not much of it left now.

Mr. KNAPP. No, indeed, we have not. Gentlemen, I do not want to take up more of your time. I shall be glad to answer any questions.

The CHAIRMAN. What is the price now for timber?

Mr. KNAPP. I do not know.

The CHAIRMAN. What does the Government have to pay where it is furnishing the timber?

Mr. KNAPP. I think that they are paying for these timbers something like $40 a thousand on the average. That takes in the whole unit, decking and ceiling.

The CHAIRMAN. That has been a raise?

Mr. KNAPP. I think a raise of about $5 per thousand feet.

Senator JONES. The Government fixes the prices?

Mr. KNAPP. Yes; I understand it does.

The CHAIRMAN. You speak about the supply. Is the price going to climb?

Mr. KNAPP. It might do so, but that would make a comparatively small difference in the price of the vessel. For instance, you take these ships using about 1,500,000 feet, and suppose the price went up $5 per thousand feet, that is only $7,500 on the ship.

Senator NELSON. The Government is supplying a good deal of your heavier timber for these eastern shipbuilders?

Mr. KNAPP. They placed an order with us for 40,000,000 feet.

Senator NELSON. Heavy timber?

Mr. KNAPP. Yes.

Senator RANSDELL. You are a lumberman and shipbuilder outside of this shipbuilding, or is it in conjunction with your shipbuilding?

Mr. KNAPP. I have been in the sawmill business in Oregon about 20 years.

Senator RANSDELL. A great many men have tried to make us believe that we had only 40 years' supply of timber in the United States.

Mr. KNAPP. Those gentlemen are all out of office.

Senator NELSON. They have a little timber up in Alaska, have they not?

Mr. KNAPP. Yes, sir.

Senator RANSDELL. I was just wondering if you thought we would be entirely out of timber in that time.

Mr. KNAPP. No, sir.

Senator NELSON. What suggestions have you to make as to what we can do to expedite the shipbuilding and help the Government?

Mr. KNAPP. If the province of the committee is to make recommendations to the Emergency Fleet Corporation and you wish to take my statements or investigate, either one, if carried out to what I would call a logical conclusion, would be a recommendation to the Fleet Corporation that they continue the building of wooden vessels.

Senator JONES. And continue letting contracts to all yards capable of carrying it on?

Mr. KNAPP. Yes, sir; and establish that policy as quickly as possible and let it be known to the country.

Senator MCNARY. That is, make the policy definite and certain?

Mr. KNAPP. Yes. The timber business ranks next to the steel business in importance to the country, and it takes quite a little time for these big interests to turn and adjust themselves.

Senator NELSON. You have other yards in or near Portland?

Mr. KNAPP. Oh, yes, sir. The Columbia River district is producing about one-tenth of the tonnage of the United States.

Senator NELSON. Wooden?

Mr. KNAPP. No, sir; wooden and steel, about 50–50.

Senator NELSON. One company near Portland was organized after the emergency board was created and the Government helped to build the plant. Do you know that company?

Mr. KNAPP. If you would call them by name I probably would know them.

Senator NELSON. How?

Mr. KNAPP. I know them all. If you would call them by name I would probably know them.

Senator JONES. The Grant-Smith-Porter Co.

Mr. KNAPP. Yes, sir.

Senator NELSON. Are they in Portland?

Mr. KNAPP. Yes, sir.

Senator NELSON. They had no yard before they entered into this business?

Mr. KNAPP. No, sir.

Senator NELSON. They were not shipbuilders either, were they?

Mr. KNAPP. No, sir.

Senator NELSON. What were they engaged in?

Mr. KNAPP. They were railroad contractors—general contracting work.

Senator NELSON. And they formed a corporation, and then the Government advanced them money to build the yard?

Mr. KNAPP. I can not testify as to that.

Senator NELSON. Is not that your understanding?

Mr. KNAPP. I have never discussed that matter with anyone.

Senator HARDING. Mr. Knapp, do you think it would be feasible for the Government to fix the price of ships, the price of labor, and make it a stable thing to build ships?

Mr. KNAPP. To fix the price of ships, to fix the price of labor, and make it stable?

Senator HARDING. Yes.

Mr. KNAPP. Well, if you had in view——

Senator HARDING. For this emergency?

Mr. KNAPP. Yes, I do.

Senator HARDING. Would that still invite the activities of contractors?

Mr. KNAPP. I think it would. Let me teell you something else. I do not know whether you want this in your records, but let me give you my version——

Senator JONES. We want it in the record.

Mr. KNAPP. It is all right; let us put it in the record.

Senator HARDING. Let it go in.

Mr. KNAPP. We hear about wooden ships not being practical. England wanted wooden ships and was begging us to build them at the time the Emergency Fleet Corporation was organized. Norway and Sweden had always wanted wooden ships.

Senator HARDING. Did they not have a good many building on the Pacific coast?

Mr. KNAPP. Yes. The French people swear by the wooden ship and Italy is in the market for wooden ships. The ideal course would be for the Fleet Corporation—the biggest shipbuilding corporation in the world—to go on a fixed policy building wooden ships as well as steel ships and help supply these other countries with tonnage, if the United States does not require the output of all of our yards, if they want it.

Senator RANSDELL. You were building wooden ships for somebody before this war was entered into, or at least before we got into it?

Mr. KNAPP. Yes sir; Norway and France; no question was raised but what the wooden ships were good.

The CHAIRMAN. What size were they? Does that make any difference—the tonnage?

Mr. KNAPP. I do not think the wooden ship is practical much above 5,000 tons.

The CHAIRMAN. And anything below 5,000 tons is advisable to have built of wood.

Mr. KNAPP. Yes, sir.

The CHAIRMAN. The work is progressing satisfactorily now, is it, Mr. Knapp?

Mr. KNAPP. Yes, sir; I believe I voice the sentiments of every manager of every shipyard on the Pacific Coast when I tell you that the work as now being carried out by these gentlemen whose names I mentioned a little while ago is perfectly satisfactory.

Senator McNary, Mr. Knapp, state to the committee what would be the maximum capacity of wooden ships that might be constructed on the coast in the course of a year similar to the Ferris type?

Mr. Knapp. That is, in the two States, Oregon and Washington?

Senator McNary. Yes.

Mr. Knapp. Of, between 1,000,000 and 2,000,000 tons.

Senator McNary. Have you reached that maximum?

Mr. Knapp. Oh, no.

Senator Ransdell. You do not mean the present yards could do any such thing as that?

Mr. Knapp. They could by making the expansion I referred to a while ago.

Senator McNary. How long a time would it require?

Mr. Knapp. Oh, you can lay a keel——

Senator McNary. To make these expansions?

Mr. Knapp. That is what I am speaking of, would be to lay the first keel. The ships could be started in 30 days after the first contracts were let.

The Chairman. We are very much obliged to you, Mr. Knapp, for your very interesting statement.

Mr. Knapp. I assure you it has been a pleasure, and I appreciate the courtesy, gentlemen, of coming before you.

(Thereupon, at 4.45 p. m. the committee proceeded to the consideration of executive business, and at 5 o'clock, p. m. adjourned to meet at 2 o'clock, p. m., Saturday, January 26, 1918.)

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